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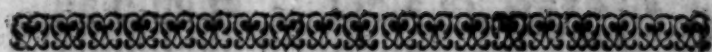
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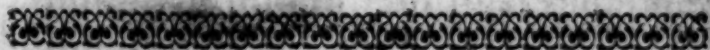
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A
TREATISE
OF THE
Education *and* Learning
Proper for the
Different Capacities of Youth.



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TREATISE

OF THE

Education *and* Learning

Proper for the

Different Capacities of Youth;

Founded on the

Principles of Natural Philosophy :

Whereby all

Parents, Tutors, and Governors of YOUTH,
may be informed what Sort of Learning
best suits with each Genius:

By the due Observaⁿ whereof, they may be
enabled to adapt the Studies of their Children
and Pupils to their respective Capacities, and
thereby lay a just Foundation for their future
Fame and Fortune.

Principally extracted from the *Examen de Ingenios* of
the famous Spaniard Dr. JOHN HUARTES: A Work
so universally admir'd, that it has been translated into
Latin, and all the *Modern Languages*.

L O N D O N :

Printed for C. RIVINGTON, at the *Bible and Crown*
in *St. Paul's Churchyard*; J. OSBORN, at the *Golden-*
Ball in *Pater-Noster-Row*, and J. LEAKE, at *Bath*.

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Proprietor: Mr. J. H. H. H.

Different Capital of Youth;

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THE UNIVERSITY OF CHICAGO



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THE SOUTH OF THE TROPICS

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THE
PREFACE.



OUR principal View in the following Sheets, being to give an Abstract of the most useful Parts of the celebrated Dr. *Huarter's Examen de Ingenios*, accommodated to the Youth of our own Country and to the present Taste, we shall have little to do in this Place, but to present our Readers with some Extracts from the Preface and Dedication to the *English* Edition of it, and from the Author's Epistle to the King of *Spain*; which give an ample Account of the Design and Usefulness of the Piece.

With respect to our own Part of this Performance, it is necessary to observe, That we have been far from confining our selves closely to the Original; which, in many Places, is almost unintelligible, and too philosophical for the middling Class of Parents and Tutors, and seems too abstruse to promote the Instruction of Youth in general; which are the principal Points we have had in View throughout the following Sheets: And therefore the Reader will not be surprized that we have brought several modern Instances, as Occasion offer'd, to illustrate the Author's Observations, and that we have endeavour'd to make him familiar to the present Times and Manners. In particular we must observe, that we have omitted all those Parts where the Author had run into physical Disquisitions, of too nice and delicate a Nature to be touch'd upon in a Piece calculated, as this is, for the Perusal of Persons of all Ages and both Sexes. And we have also frequently added several Particulars of our own, that seem'd naturally to fall in with the Author's Design, and capable of embellishing the Subject treated of.

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As to the Original itself, there have been no less than Five or Six several Editions of it, Three of the *Italian*, Ten or Eleven of the *French*, into which it was at two several times translated; as also Once into *Latin*, and Once into *Dutch*. If all this proclaims not its Merit, at least it speaks its good Fortune, in the kind Reception it has met with in the World. And we hope, that what we have done, with a View to make it more generally useful for all Sorts of Persons, in which we have endeavour'd to retain the Author's Beauties, and only lopped off his Excrencies, will be thought an acceptable Service by all such as know the Merit of the Piece.

It would be no small Advantage to the Commonwealth of Learning in general, and to this Kingdom in particular, if an Attempt were made to put in Practice our Author's Scheme; for if there were *Triers* of Wit appointed by the State, according to his Proposal, to watch the Genius of Children, in their first Appearances and Efforts, whether to make the Scrutiny as the Antients advis'd, by leading them to the Shops of Mechanicks, and to chuse

Trades for them, according to the Tools they chuse to play with, or to descend so far as to observe their childish Plays and Diversions, wherein the Man is often represented in Miniature. Thus *Vesalius* began in his Childhood to cut up Rats and Mice; *Michael Angelo* to draw Figures, and *Galen* to make Medicines.

By these Means there would be fewer Dunces in the Universities, as well as fewer Bunglers in the Shops; not a few, upon such Enquiry in the Schools and Inns of Court, would be sent to take their Degrees in the Trades and Manual Arts; their *Bodies* being made for Labour, not their *Minds*; and their *Genius* suiting with such Professions, as rather require broad Shoulders and strong Backs, than good Heads: Nor, upon Examination, would there be found fewer in the Shops, fit to fill the Places of many Graduates in the Universities. And thus by this mutual Transplantation, in the end, the Universities might be supplied with abler Professors from the Shops, and the Shops again, in return, stored with better Artists from the Universities. Were this Care duly taken to prevent the mismatching Men and Professions, what surer and more effectual way

ordinary than for that as well as other Professions to abound with Pedants, and Men of narrow Spirits, whose Heads are filled with Images all of one Colour; whereas but few, very few! Universal *Genius's* appear among the Sons of Men, who imitate the Light, which is alike Friendly and Impartial in the Visits it makes, and the Colours it receives, disdaining not to descend equally to every Eye, and to communicate indifferently with all Colours.

To the End, therefore, that the Works of all Artists may attain the utmost Pitch of Perfection, and be of the greatest Use to the Common-Wealth, it seems very reasonable that by a Law it should be provided, that each Person should stick close to the Profession most agreeable to his Talent, and let the rest alone. For considering how limited the Wit of Man generally is to one thing, and no more; it will be mostly found, that every Man who pretends to attain two different Arts, will certainly prove defective in one, if not in both of them. And accordingly, that none might err in the Choice of what is most agreeable to the Bent of his Natural Inclination, there should be, as we have

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hinted, *Triers* appointed by the State, Men of approved Sagacity and Knowledge, to search and sound the Abilities of Youth, and, after due Search, to oblige them to the Study of that Science their Heads most incline to, instead of abandoning them to their own Choice. By which Means Art and Nature being thus happily united, the most inimitable Artists in the World, as well as the most accomplish'd Works, would proceed from this desirable Union.

All the antient Philosophers have found by Experience, that where Nature disposes not a Man for Knowledge, 'tis in vain for him to labour to attain it by the Rules of Art. But not one of them has clearly and distinctly declar'd what that Nature is, which renders a Man fit for one, and unfit for another Science; nor what Difference of Wit is observed among Men; nor what Arts and Sciences are most suitable to each Man in particular; nor by what Marks they may be discern'd, which is of the greatest Importance. These four Points, however difficult, are treated of in the following Sheets, besides many others, that collaterally fall in with this Doctrine, by which a curious Father may be enabled to judge how to apply to each of his Children
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way could be opened, for the Advancement of Learning, and the Flourishing of Trade at once?

It must indeed be confess'd, that the Difference of Studies seems not greater, than the Diversity of Talents in Men that are framed for them: The *Genius* of a *Logician*, for Instance, lies not the same way with that of a good *Grammarians*, in-somuch that *Dulbard*, *Ludovicus Vives's* Master, used to say, as his Scholar has told us, that the worst *Grammarians* would make the best *Logicians*: Nor are the Talents of a *Linguist* the same with those of a *Mathematician*, as appeared in a Tryal of Skill between an eminent *Linguist* and a *Mathematician* of no less Name of our own, *Bryan Walton*, Bishop of *Chester*, and Mr. *Oughtred*, who entred into a mutual Agreement that each should teach the other his Skill. The Success of which was no other than this, that tho' the Bishop proceeded a great way in making Mr. *Oughtred* a good Oriental *Linguist*, yet so far was the other, in return, from being able to make the Bishop a tolerable *Mathematician*, that he could never get him to master the plainest a Lesson in *Euclid*. And we may add, that a late * *Italian* Author

* Bartolus.

P R E F A C E.

takes notice of such Studies as will not well associate and match together; particularly these, viz. a * *Poetical Physician*, a *Philosophical Historian*, a *Mathematical Civilian*, all which are, as he terms them, no less than Monsters in a Learned Academy.

Nor is the Disproportion between several Arts greater or more visible, than even the Disparity between several Parts of the same Art, of which, to say no more, this may suffice for Instance, which hath been observ'd by Painters of Men of their own Profession, that the greatest Masters in Colouring, have rarely or ever proved good Designers, and so on the contrary: Whether it be easier for Colours to meet and mingle, than to unite good Colouring and Design in the same Picture; or whether it be that Painters in this inherit the Fate of their own Colours, and that different Parts of their Employment will no more unite, than disagreeing and unsociable Colours, we leave to others to enquire. This only we take leave to say, that nothing is more

* *England* has produced lately several Genius's equally noted for *Phylick* and fine Poetry; which will stand as so many Exceptions to this general Rule.

ordi-

And indeed it must be own'd, that there are many Persons not incommoded with this distemper'd Excess, who seem at times to have a sound Judgment, and speak and do very rational Things; and yet, at other times, are very extravagant and unaccountable in other of their Actions: Such are perhaps the more incurable, because the calm and moderate Temperament they generally possess, hinders them from thinking that due Reflexion necessary, which might be productive of a more regular Conduct. And thus may we account for the distemper'd Actions of some Men, who seem in the general wise and discreet.

The great Philosopher *Democritus* indeed carried this Point further, including all Mankind, under the general Imputation of being mad or diseased. *Every Man*, says he, *from his Birth even to his Death, is but a Disease: When he is brought into the World, he is helpless, and wants the Aid of another: When he encreases in Strength, he becomes insolent, must be corrected, and have a Master: When he is at full Strength, he is rash: When he declines to Old Age, he is miserable, does nothing but vaunt and prate of his past Labours; at length he drops, with his fair Qualities, into the Ordure of his Mother's Belly.*
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These Words were admired by the great *Hippocrates*, who relishing a Treat of such high Wisdom, return'd to visit him, and ask'd him why he laugh'd without ceasing at all Mankind? To which he answer'd; *Don't you see that the whole World is raving mad in a burning Fever? Some buy and feed Kennels of Hounds that are to devour them: Others run mad after Hunting-Horses: These would command many People, and yet know not so much as how to govern themselves: Those burn with Love, take Wives to drive away Incontinence, and soon prove as irreconcilable in their Hatred to them; others languish with desire to have Children, and when these Children are once grown up, they turn them out of Doors. All these unprofitable transient Cares and Afflictions, what are they but incontestable Tokens of consummate Folly? Nor do Mankind stop here, for having no greater Enemy than Quiet, they wage War one with another; they depose their Kings, and advance others, perhaps much worse, to their Dignities; they account it a Glory to murder one another, and turn their Swords against their own Mother's Breasts; go on wickedly searching into the Bowels of the Earth, which administers Matter to all their Crimes. In fine, says he, this World, to speak properly, is but one great Bedlam, where every Man's*
Life

the Science in which he shall most excel; which Method *Galen* reports his Father took with him, when a Child; for discovering in his Son a *Genius* adapted to Physick, he enjoined him to study that, and not to trouble himself about any other; conformable to a Law, in *Plato*, which required every one at *Athens* to apply himself to one Science only, and particularly to that most natural to his *Genius*, for this very Reason, that Man's Nature is not capable of exercising two Arts, nor of mastering absolutely two different Studies at once. And had *Baldus*, (that celebrated Lawyer) always studied and practised Physick, as he began, he would have passed but for an Empirick, having no *Genius* for that Science, and the Law at the same time would have lost one of its greatest and most incomparable Interpreters.

The Natural Philosophers are agreed, says *Huartes*, that all the Faculties with which an Act of Sensation is performed, should be clear and pure from the Tinctures of the sensible Object; not to make quite different and absolutely false Reports of the same. For Instance, let us suppose four Men defective in the Composition of the Organ of Sight, and that in one a Drop

of Blood should be mixt with the Crystalline Humour, in the other a Drop of Choler, in the third one of Phlegm, and in the fourth one of Melancholy; if these know nothing of their Defects, we will lay before their Eyes a Piece of blue Cloth to judge of its true Colour; 'tis certain the first will say 'tis Scarlet, the second that it is Yellow, the third that it is White, and the fourth that it is Black, and that each of them would make no Difficulty to swear it, and to ridicule his Companion upon it, as one that suffers himself to be deceived in a thing so clear: And if we should let these four Drops of Humour fall down to the Tongue, and give to these four Persons a Glass of Water to drink, one would say, it was sweet; another, it was bitter; the third, it was salt; and the last, that it was sowre. Thus we see here four different Judgments in two Qualities, because each has his sensory Organs tinctured, not one of them all hitting upon the Truth. The same Reason and Proportion is kept by the Internal Faculties, in the Place of their Objects; and thus it would be should we carry up those four Humours even to the Brain; if they happened to cause an Inflammation there, we should see a thousand Sorts of Follies and Extravagances.

And

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Life is a ridiculous Comedy, which serves to make Sport for all the rest; and this truly is the Subject of my Laughter. Whereupon Hippocrates cryed out aloud; Democritus is no mad Man, but the wisest of Men, and one that can make us all wiser.

'Tis to be observed however, to palliate the Affliction of the most miserable among the Sons of Men, that no ill Constitution ever attends a Man, that debilitates him in one Faculty, but in the same Proportion strengthens him in another; and in that even which requires a different Temperament: For Instance, if the Brain being well temper'd, should happen by *Excess of Moisture* to lose its good Temperament, the Memory would assuredly prove more excellent, tho' the Understanding would be impair'd, as we shall hereafter make out: And if a Man loses this good Temperament by too much *Dryness*, the Understanding will be thereby encreased, but the Memory diminish'd. So that as to what concerns the Operations relating to the Understanding, a Man that has a dry Brain, shall much more excel, than he that has a sounder and more temperate one: And for the Operations of the Memory, a Man of a bad Constitution, thro' too much
Moisture,

Moisture, in that excels a Man of the best Constitution in the World; for, according to the Opinion of Physicians, Men of the worst Constitution, in many things surpass those of the best. For which reason *Plato* said, it was a Miracle to find a Man of an excellent Wit, that had not some Madness (as much as to say, a hot and dry Distemper of the Brain :) so that there is an intemperate Distemper appropriate to one sort of Science, which is quite contrary to another. Therefore 'tis requisite a Man should distinguish what kind of Infirmary and Distemper his is, and what Science in particular it suits with, for in that Science he may discover Truth, but in the others he can only make Conjectures at random.

Men of harmonious Constitutions, as we shall hereafter prove, have in a degree of Mediocrity a Capacity for all Sciences, though they will never excel in any; but those that are otherwise, are fit but for one only, which if they happen to hit upon, and study with Care and Application, they may be assured to succeed wonderfully in it; but if they fail in their Choice and Application, they will make but small Advancements in the other Sciences.

ences. History confirms to us, that each Science was discover'd by Men of general ill Constitutions.

If *Adam* and his Children had continued in the Terrestrial Paradise, they would have had no occasion for Mechanick Arts, nor any of the Sciences now taught in the Schools.

But no sooner had he fallen, but he found it needful to have recourse to Arts and Sciences to support his Misery. The first Science that appeared in the Earthly Paradise, was Skill of the Law, by means of which was form'd a Process, with the same Order of Justice, as observ'd at this day, citing the Party, and declaring the Crime he was accused of, the Accused answering, and the Judge pronouncing Sentence.

The second was Divinity; for when God said to the Serpent, *And she shall bruise thy Head*, *Adam* understood, as he was a Man whose Understanding was full of infus'd Sciences, that to repair his Fault, the Divine Word was to take Flesh in the Virgin's Womb, who by her happy Delivery should trample under her Feet the Serpent and

and all his Powers ; by which Faith and Belief he was to be saved.

Next came Physick, because *Adam* by Sin became Mortal and Corruptible, subject to an infinite Number of Infirmities.

All these Arts and Sciences were first exercised there, receiving afterwards their due Improvement and Perfection, by means of Men of Wit and Ability qualified for that Purpose.

From what has been said then, result these three Conclusions, viz.

1. That of all the different Wits of Men, there is but one (as predominant) can fall to one Man's Share. Nature, indeed, sometimes seems to strain hard to form two or three Excellencies in some one Man ; but, being unable to effect what she designed, generally leaves him in a manner unfinish'd and in haste, and he appears only a rude Essay, and imperfect Piece.

2. That to each different kind of Wit corresponds one Science only, and no more, in a transcendant Manner ; for which reason,
if

if a Man is not well assured in the Choice of what suits his Talent, he will find himself very defective in the rest, notwithstanding the most assiduous Application.

3. That after a Man has found out what Science corresponds best with his Wit, there remains, if he would not err, another greater Difficulty; which is, whether the *Practice* or *Theory* suits best with his *Genius*; for these two Parts (in all Sciences whatever) are so opposite to each other, and require Wits so diverse, that they may be set one against the other as Contraries. A hard Sentence this, and yet hard as it is, there lies no Writ of Error, or Appeal against it; for who can say he has received any Wrong?

There are Diversities of Gifts (says the Apostle, 1 Cor. xii.) but the same Spirit. And there are Diversities of Administrations, but the same Lord: And there are Diversities of Operations, but it is the same God which worketh all in all; but the Manifestation of the Spirit is given to every Man to profit withal; for to one is given by the Spirit the Word of Wisdom; to another the Word of Knowledge, by the same Spirit; to another Faith, by the same Spirit; to another the
Gift

Gift of Healing, by the same Spirit; to another the Working of Miracles; to another Prophecy; to another the discerning of Spirits; to another divers kinds of Tongues; to another the Interpretation of Tongues: But all these worketh that one and the self-same Spirit; dividing to every Man severally as he will.

And it may be observ'd, That in the general System of Providence, with regard to the Government of this World, it has pleas'd God to create in all Mankind, to one another, and from the human Species down to the lowest Parts of the Creation, a necessary and mutual Dependence. And this is excellently observ'd, and beautifully set forth by a † Writer of our Day, in the following Verses.

*God in the Nature of each Being founds
Its proper Bliss, and sets its proper Bounds:
But, as he fram'd a Whole, the Whole to
(bless,
On mutual Wants, built mutual Happiness;*

† Essay on Man, Part III.

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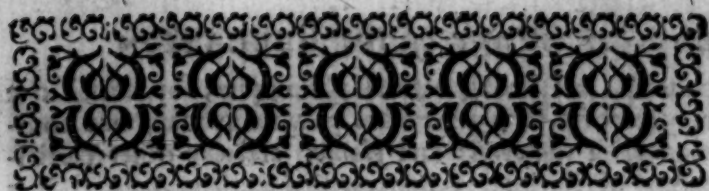
*So from the first Eternal ORDER ran,
And Creature link'd to Creature, Man to Man.*

And in another Place,

— *Parts relate to Whole,*
One All-extending, All-preserving Soul
Connects all Being, greatest with the least,
Made Beast in Aid of Man, and Man of
(Beast :
Each serv'd and serving; nothing stands
(alone :
The Chain holds on, and where it ends,
(unknown.

And thus may it be said, That the lowest Capacities among Men, may be equally useful in the Parts allotted them by Providence, with the highest : But how to suit these Parts properly to every Actor in this Scene of Life, is the Difficulty; and the principal View of the ensuing Pages.

A T R E A.



A
TREATISE
OF THE
Education and Learning,
Proper for the
Different Capacities of YOUTH:

CHAP. I.

*What Wit is, and what differences of it are
ordinarily observ'd among men.*



S *wit* and *capacity* in men is the entire subject of this Book, it will be convenient, first, to understand the definition of *wit*, and what it essentially comprehends. We must know then, that the word *ingenium* in *Latin*, which signifies *wit*, is derived from one of these three words, *gigno*, *genero*, *ingenero*, as much as to say *ingender*; and it seems rather to come from the last, considering the sound and number of letters and syllables it borrows thence, and what we shall hereafter add of its signification.

THE reason upon which the first inventers of this word built, is not trivial, but required much subtle speculation,

culatation, and strong natural philosophy; by which one may discover two generative powers in man, one common with the *beasts* and *plants*, and the other participating of spiritual substances, *God* and the *Angels*. It is our province to discourse of the first, which is well known, there being more difficulty in the second, because their birth, and manner of procreation, are not so manifest to all the world: nevertheless, speaking according to natural philosophers, 'tis a clear case, that *wit* is a generative power, and, if we may so say, becomes pregnant, and brings forth; and moreover, as *Plato* affirms, wants a midwife to deliver her. For in the same manner as the plant or animal in the generation of the first sort, gives a real and substantial being to what it produces, which it has not before generation; even so, *wit* has the Power and natural force to produce and bring forth within it self a Son, which the natural Philosophers call NOTION, or *Idea*, or, as it has been accounted, *the word of the spirit*. And not only these philosophers speak of it after this manner, maintaining the understanding to be a generative faculty, and calling that a son which it produces; but sacred writ it self, speaking of the generation of the eternal word, makes use of the same terms of *father* and *son*, or *ingender* and *bring forth*. *When there were no depths I was brought forth; when there were no fountains abounding with water; before the mountains were settled, before the hills, was I brought forth*: so also is it certain, that the divine word had its eternal generation from the prolifick understanding of the Father. *My heart (that is to say, my thoughts) hath indicted a good word*: And not only the divine word, but also all things comprehended in the universe, visible and invisible, have been produc'd by the self-same power. Whence the natural philosophers, considering the fecundity of the divine understanding, have named it *genius*, or the *engenderer*.

AND though the rational soul, and other spiritual substances, may be call'd *genii*, from being fruitful in the production of some thoughts relating to science, yet they have not always an intellect of sufficient power to give a real independent being to what they ingender: but, however,

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proper for different Capacities.

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'tis necessary, in order to draw a perfect idea by which we are to form such thoughts, to make before-hand a thousand strokes, as it were, in the air, to build models, and in the end to set our hand to the work to give them the being they ought to have; and notwithstanding all these essays, they happen for the most part to be defective.

THIS doctrine then being suppos'd, we must now understand, that the arts and sciences men study, are only a sort of images, and figures, begotten by their minds in their memory, which represent to the life the posture and natural composition of the subject relating to the intended science: as for instance, *physick* was nothing else in *Hippocrates* and *Galen's* heads, but a picture, nakedly presenting the structure of the body of man, together with the cause and cure of his diseases. The skill of the *law* is another figure, representing the form of justice, which preserves human society, making man live in peace and tranquillity. Whence 'tis easy to perceive, that if a scholar under the conduct of an able master, cannot form in his memory such another image, and as exact as that laid before his eyes, when he is discoursing to him of it, there is no doubt to be made, but he has a barren invention, and such as will never be able to conceive, or bring forth any thing but extravagancies and monsters. And so much for the word *ingenium*, deriv'd, as we have said, from the verb *ingenero*, as much as to say, *to engender within himself an entire and true figure, representing to the life the nature of the subject intended to be studied.*

CICERO defines *wit* after this manner, *docility and memory ordinarily call'd by the same name of wit*; wherein he has followed the opinion of the common people, who rest contented, if their children are but docible, or easy to be instructed by another, and endu'd with a competent memory to retain and preserve the figures conceived in the understanding: for which reason *Aristotle* said, That the *ear* and the *memory* must be join'd to reap any advantage from the sciences. But to speak truth, *Cicero's* definition is too short, because *docility* only imports such wits as want a master, without including a great many inventive ones, whose felicity is such, that,

assisted by the subject only, without the help of any body, they produce a thousand conceits they never heard spoke of; such, for example, were those who first found out the arts. In another place, *Tully* adds *memory* to the definition of *wis*, of which, however, *Galen* says, that it has no kind of *invention*; as much as to say, that it is unable of itself to engender any thing, for so much *Aristotle* teaches us, that a strong memory impedes the copiousness of the understanding, as not being prompt to conceive, or bring forth, but seeming only to keep and preserve the figures and species of what the other powers have conceived, as is observ'd of the learned, who have excellent memories, that they speak and write nothing but what others have been the authors of.

'Tis true, if we consider well the term *docility*, we shall find that *Cicero* has not been, in the main, unhappy in his definition; for *Aristotle* says, that prudence, wisdom, and the truth of sciences, are stow'd among natural things, there to be sought after, as in their proper fountain. He that has sharpness of understanding, and a good ear to distinguish what nature teaches and divulges in her works, shall wonderfully improve by the contemplation of natural things, and has no need of a master, to shew him what he may learn well enough from the brute beasts and the plants. *Go, drone, take thy lesson from the ant; consider her toil, and become wise by her example; see how she, without teacher or learning, lays up provision in the summer for the winter.* *Plato* took little notice of this *docility*, imagining, perhaps, there were no other masters to instruct men, than those mounted in chairs; which made him say, *The field and the trees can teach me nothing, but the conversation of men only in the city.* *Solomon* spoke better, when he begg'd of God the ability to govern his people: *Give, if thou pleasest, O God, to thy servant judgment, that he may rule thy people, and distinguish between good and evil.* By which he ask'd only a clear and refin'd understanding, to the end that when doubts occur'd to him in his government, he might derive from the nature of the thing the true judgment he ought to make of it, without going to seek it in books: and it could be nothing else but

but the nature of the thing that inform'd him, in the dispute between the two women, which was the child's true mother, namely, she who could not bear the dividing of it.

THE same kind of *docility* and clearness of understanding was given by Jesus Christ to his disciples, for their understanding the holy scriptures, after their natural dulness and indisposition of mind was withdrawn, as it is said, *He opened their understandings, that they might understand the scriptures.*

PLATO, speaking of wits that were to learn the divine sciences, says, *That they ought not only to make choice of bold men, that should strike a terror into their enemies, but also chiefly of those to whom nature had been liberal in the gifts requisite to divinity; that is to say, those of a sharp and ready wit.* By the way reprehending Solon for saying, this sort of science was to be studied in old age.

THOSE that are masters of such qualifications, proceed in the studies they are engaged in with very little labour; because their understanding has nothing to do but to preserve in their memory the figures and species that enable them, upon occasion, to dispute; those natural things at all times, suggesting to us such ideas as we would frame to ourselves in speculation, and when they are supernatural, they need only to understand the species and figures that have pass'd through their senses: Which occasioned Plato to say, *That we need not divest sublime things of their matter, to make them sensible to us; for being in their nature most excellent and elevated, they are not such as naked reason is so well able to comprehend.* For which reason he declares, that the greatest wits were required for divine studies, rather than any other, seeing they were above our reason. Whence 'tis certain, that that so fam'd maxim of Aristotle, *That there is nothing in the understanding, but what has pass'd through the sense;* has no place in the second sort of *docility*, but only in the first, in which the ability extends no farther than to receive and retain in the memory what the master teaches: Whence may be clearly collected, what an abuse is committed in these days in

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the study of theology, seeing that many persons whom nature design'd to cultivate and till the earth, are very forward to thrust themselves into holy orders.

WITH these two sorts of qualities of which we have treated, correspond as many kinds of wit; *Aristotle* takes notice of the first, *He has true wit that acquiesces in, and assents to him that speaks truth*, because the man who remains not convinc'd by strong and solid reasons, and that forms not, in his memory, a good idea of what is propos'd to him, sufficiently declares to us, that his understanding is shallow. 'Tis, indeed, worthy of observation, that many scholars very readily learn all their masters teach them, retaining it in their memories, without any difficulty, which may happen, because the master is of great ability, and such a one as *Aristotle* described, when he said, that it is requisite for a learned man *not only to know all that may be drawn from principles, but also that he have a perfect knowledge of the principles themselves.*

THOSE scholars that concur with such a master, without doubt have an excellent wit; which they also further shew, when they receive and understand the doctrine of the master, without his subjoining his own opinions and conclusions, with the principles upon which they are founded.

THERE are other rude and gross dunces, who perceiving the sharper wits in more esteem, very inconveniently, and for quite different reasons, in imitation of the other, press their master with a thousand impertinences, he not being so able to clear their doubts, as they are to discover their weakness: 'tis of them *Plato* says, *That they have not sense enough to be convinc'd.* But he that has a nimble and ready wit, need not wholly rely on his master, nor swallow down any thing that appears not to be consonant to his doctrine.

OTHERS are silent, and obey their master without the least contradiction, because they have not wit enough to discern the falsity and ill consequence of his corollaries from the first principles.

ARISTOTLE has thus defin'd the second difference of wit, *He has the most excellent wit, who of himself understands*

derstands every thing: which kind of discerning wit, bears the same proportion with regard to knowledge and understanding, as human sight does to forms and colours, when 'tis clear and penetrating. As soon as one opens his eyes, he distinguishes every thing, without another view or report; but if the sight be short and weak, the most apparent and clearest things in view cannot be discern'd, without borrowing the eyes of a third man, who represents them to him. An ingenious man, when he contemplates (that is to say, opens the eyes of his understanding) comprehends from the least discourse, the being of natural things, their difference, propriety, and to what end they were created; but if there be not so large a capacity, the master, of course, must take the more pains with him, and yet, even then, as 'tis frequent, all his labour and application are to no purpose.

THE generality of people are not acquainted with this difference of wit, imagining 'tis no where to be found; and, indeed, not without great shew of reason, as the same philosopher has very well observ'd: *No Man ever came compleatly learned into the world, nor is there any natural knowledge amongst men.* In effect, we see by experience, that all they who have studied, even to this very day, have wanted a master. *Prodicus* was *Socrates's* master, who by the oracle of *Apollo* was pronounc'd the wisest man in the world; and *Socrates* taught *Plato*, whose wit was so extraordinary, that he deserv'd the surname of divine: *Plato* was *Aristotle's* master, of whom *Cicero* said, *That he was the greatest wit that ever was.* Now if this last difference of wit had been to be found in any, without doubt it would have been amongst those eminent persons: seeing then not one of them had it, 'tis a strong presumption nature cannot give it us.

ADAM only himself, as the divines deliver, was born entirely instructed, and fill'd with the infus'd sciences; and he 'twas, who communicated them to his successors: from whence it may be concluded for certain, that there is nothing new, and that there is no opinion in any kind of science, that has not been maintain'd by one or other; according to that saying, *There is nothing yet said, that has not been said before.*

To this 'tis answer'd, That *Aristotle* has defin'd a perfect wit, as it ought to be, rather than as it was; for he knew full well, there was none such in nature. Even as *Tully* describ'd a compleat orator, and own'd, 'twas impossible to find such a one, but that he would be the best that approach'd nearest to the idea he had drawn of one: 'tis the very same in this difference of wit; for though we cannot meet with such a perfect one as *Aristotle* has fram'd, yet it must be granted, we have observ'd many persons approach very near it, inventing and saying such things as they never heard from their masters, nor any mouth, and that have been able to discern and disprove the errors they taught them; at least it cannot be denied of *Galen*, that he had this difference of wit, when he said, *I have found out all things myself, having no other guide but the light only of my natural reason; whereas had I followed some masters, I had fallen into a thousand errors.* Now, though nature gave these very persons a wit that had its rise, increase, perfect state, and declension, yet she render'd them compleat at last, without doubt, though they arriv'd late at it, as *Aristotle* said; but since she gives it not but with these conditions, we need not be amazed if *Plato* and *Aristotle* stood in need of their masters to instruct them.

THERE is a *third* difference of wit, which nevertheless is not absolutely different from what I have but now treated of; by means of which, some have, without art or study, spoke such surprizing things, and yet true, as were never before so much as thought of. *Plato* calls this sort of wit, *An excellent wit, with a mixture of enthusiasm.* 'Tis the same, says he, which inspires the poets with what is impossible for them to conceive, without divine revelation. Whereupon he adds, *Well may a poet be all in flames and raptures; his person being wholly sacred, he can sing nothing but what is full of God, who agitates him, transporting him beyond himself, and above his own reason: But as for those of an unelevated spirit, they can never make moving verses, nor prevail in prophecy. It is not then from any human art poets chaunt*
such

such fine things, that thou, O Homer, breatheſt, but rather from transports divine.

THIS third difference of wit adjusted by *Plato*, is actually found among men: but to aſſert, that what ſuch perſons ſay, is by divine revelation, would be an apparent and manifeſt abuſe, and ill-becoming ſo great a philoſopher as *Plato*; and is to have recourſe to univerſal cauſes, without having before-hand made an exact enquiry into particulars. *Ariſtotle* did better, who being curious to know the reaſon of thoſe wonderful things pronounc'd in his time by the *Sibyls*, ſaid, *That it came not to paſs by diſtemper, nor by divine inſpiration, but only by a natural ill-temperament*: the cauſe whereof is evident in natural philoſophy; for all the governing faculties in man, the *natural*, the *vital*, the *animal*, and even the *rational*, require each their particular temperament to perform their functions as they ought, without prejudicing, or interfering one with another. The natural virtue, as digeſtive of the food in the ſtomach, muſt have a due heat; that which gives appetite, cold; the retentive, dryneſs; and the expulſive, of what is nauſeous or ſuperfluous, a due moiſture. Whichſoever of theſe faculties poſſeſſes in a greater degree any of the four qualities by which it operates, will thereby become more powerful in that point, but not without impairing the reſt; becauſe, in effect, it ſeems impoſſible that all the four virtues and faculties, ſhould be aſſembled in one and the ſame place; ſince if that which requires ſome heat, becomes more potent, the other that operates by cold, cannot but be found more weak: which made *Galen* ſay, *That a hot ſtomach digeſted much, yet had a bad appetite; that a cold ſtomach digeſted ill, but had a good one.* The ſame thing happens in the ſenſes, and motions, which are operations of the animal faculty. Great ſtrength of body ſhews abundance of earthineſs in the nerves and muſcles; for if thoſe parts are not finewy, hard and dry, they cannot act ſteadily: on the contrary, to have a quick and lively ſenſe, is a ſign the nerves are compos'd of more airy, fine, and delicate parts; and that their temperament is hot and moiſt. How is it then poſſible that the ſame

nerves should have the temperament and natural composition which is required for motion and for sense, at one and the same time, seeing that for these two things, there must be quite contrary qualities? Which is clear'd from experience; for whereas a man that is very robust of body, has infallibly the sense of touching rude and gross, so when that sense is very exquisite, he is faint and languid.

THE rational powers, memory, imagination, and understanding are under the same rules. The memory, to be good and tenacious, requires some moisture, and that the brain be of a gross substance, as we shall prove hereafter: on the contrary, the understanding must have a dry brain, compos'd of very subtle and delicate parts. The memory then proceeding to a pitch, the understanding must necessarily be lower'd and diminish'd as much. But be it as it will, I beg the curious reader to reflect upon all the men he has known endued with an excellent memory, and I am assur'd he'll find, as to the operations belonging to the understanding, they are in a manner undiscernable.

THE same happens, as to the imagination, when it exerts its self; for as to the operations relating to it, it produceth prodigious conceptions, and such as astonish'd *Plato*: and when a man, endued with such an imagination, comes to concern himself in acting with understanding, one may, without doing him any injury, bind him as a lunatick.

WHENCE may be concluded, that the wisdom of man must be moderate, well-temper'd, and equal; as *Galen* esteems those the wisest men that are well-temper'd, because, *they are not, as it were, intoxicated with too much wisdom.*

DEMOCRITUS was one of the greatest natural and moral philosophers of his time, who arrived at so great a perfection of understanding in his old age, that he entirely lost his imagination, inlomuch, that he both said and did things so extraordinary, that the whole city of *Abdera* took him for a natural; and accordingly dispatch'd a courier to the isle of *Coa*, where *Hippocrates* liv'd, to entreat him earnestly, with offers of rich presents,

to come immediately to cure *Democritus*, who had lost all his senses: which *Hippocrates* readily complied with, as being curious to see and confer with the man, of whose admirable wisdom he had heard so much noise. He departed that very instant, and being arrived at the place of his abode, which was a desert, where he lived on a plain, he fell to discourse him; and upon asking him questions, in order to discover the defects of his rational faculty, found him the wisest man in the world; and told them that had brought him thither, That they themselves were fools, and void of sense, for having given so rash a judgment of so discreet a person; for, as good fortune would have it for *Democritus*, the matters treated on with *Hippocrates*, at that time, appertain'd to the understanding, and not to the imagination, which was disabled.



CHAP. II.

The differences amongst men unqualified for science.

ONE of the greatest indignities that can be offer'd in words, to a man arrived at years of discretion, is, said *Aristotle*, to accuse him of want of wit; by which alone, he distinguishes himself from the brutes, and approaches near to God, and which is the greatest glory that can be obtained by human nature. On the contrary, he that is born a blockhead, is incapable of any sort of literature; and where there is no wisdom, there, says *Plato*, can neither be true honour, nor good fortune; insomuch, as the wise man declared, *The fool is born to his own shame*, seeing he must necessarily be degraded to the inferior animals, and be looked upon as one of the herd, although he enjoy other advantages, as well those of nature as fortune, in being handsome, noble, rich,

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rich, high-born, and raised even to the dignity of an emperor.

It behoves all men that have the care of youth, to attend diligently to their respective capacities, and to urge them only to suitable studies and applications. 'Tis certain, that learning and sciences do not more embellish a genius proper for their culture and reception, than they expose him that by nature is a blockhead: so true is the saying, *Learning is a snare to the feet of the fool, and as manacles to his right hands.* This may be clearly seen in university scholars, amongst whom, some may be found that learn more in the first year than in the second, and in the second more than in the third: Whence came the saying, In the first year, they are *Doctors*; in the second, *Licentiates*; in the third, *Batchelors*; and in the fourth, *Ignoramus's*; and the reason of it is, as the wiseman said, *The precepts and rules of arts are but fetters for insipids.* I shall therefore exhort my readers, as I hinted before, to study well what sort of wit and ability falls to the share of those whose education may be under their direction, that they may suit their manner of life and study thereto, for 'tis certain that there is no man, how gross and imperfect soever formed, but nature has designed him for something; and he that will make but a despicable figure among the *Literati*, may shine in some parts of mechanicks, or husbandry, or perhaps, thro' his industry, and frugality, in mercantile affairs, may one day be able to serve the common-wealth one way, which he could never be of use to another.

To come to the matter in hand: To the *three kinds of wit* propos'd in the foregoing chapter, correspond *three* respective kinds of *disability*. There are some men whose souls are so immers'd in matter, and clogg'd with the qualities of the body that oppress the rational faculty, that they are eternally incapable of conceiving or acting any thing relating to learning and knowledge. The disability of these people, very much resembles that of eunuchs; having disabled understandings, cold and malefic, if one may so say, without natural heat or vigor to produce the least thought of learning; these never arrive so much

much as at the first principles of arts, and are unable to form an idea of them in their minds; from whence we may strongly conclude them wholly incapable of the sciences, and that the gate through which they should pass, is compleatly barr'd, so that they need not break their brains to study, for neither the lash of the rod, nor method, nor examples, nor time, nor experience, nor any thing in nature, can sufficiently excite them to bring forth any thing. The men of this incapacity differ very little from brute beasts; they are always drowsy, nor seem they ever to awake; of such the wise-man speaks, *To set the treasures of wisdom before the eyes of a fool, is as speaking to a man in a sound sleep*: The comparison is very just and proper, because *sleep* and *stupidity* proceed alike from the same principles, that is to say, the great coldness and exceeding moisture of the brain.

THERE is another kind of incapacity in wit, not quite so stupid as the former, because, at least, they conceive the first principles; and draw conclusions thence, tho' few, and not without much pains: but the impression of them remains in their memories no longer than their masters are talking to them, and making them understand the same by examples and methods of teaching agreeable to their rude and gross understandings. They resemble some women, who being big with child, are delivered, but the child dies as soon as it is born. These mens brains are full of a flegmatic moisture, for which cause the ideas finding nothing oily, or viscous, neither stick nor are pliant; wherefore to teach them, would be to draw water with a sieve. *A fool's heart and mind are like a bottomless vessel, pour in what precepts of wisdom you please, none will remain there.*

THERE is a *third* sort of disability very common among men of letters, who have some smattering of wit; for they take the first notions, and draw thence their conclusions, with which they overcharge and load their memory, but when they should range every thing in order, commit a thousand blunders. There is found so great a confusion of the figures in the memory of this *third* sort of insipids, that when they would be understood, they have no less than an hundred ways of speaking

speaking to express themselves, because they have conceiv'd an infinity of things, altogether undigested, and without order or connexion of parts. These, in the schools, are call'd *confus'd*, whose brains are unequal, as well in substance as temperament; in some places compos'd of delicate parts, and in others of gross, and ill-temper'd; and because it is also various and un-uniform, sometimes they speak witty and notable things, and immediately after fall into a thousand impertinences: of these it is said, *A fool's wisdom in his brains, is like a house in ruins; his knowledge wants words to express it self.*

NAY, I have observ'd a *fourth* defect amongst men of letters, which is not altogether incapacity, and yet they have not wit enough; for I find they that possess it, take learning, retain it firmly in their memory, fix the forms with the correspondence they ought to have, speaking and acting very well when there is occasion for it; but if one founds them, and should ask the essential causes of what they know and understand, they are easily found to have no bottom, and that all their sufficiency was but a faculty to comprehend the terms and axioms of the doctrine they were taught, without penetrating how, or why it was so. *Aristotle* said of these, *That there are some men who speak, as it were, by natural instinct, and say more than they know, or consider, after the manner of inanimate beings, who fail not to act very well, although they are as insensible of the effects they produce, as the fire of what it burns; and the cause of this is, nature leads them, so that they cannot fail of attaining their end.* *Aristotle* might well have compar'd them to some animals, who seem to perform all their actions with a shew of reason and design; but he supposing these animals had, at least, some kind of knowledge of what they did, pass'd to inanimate agents, because, in his opinion, these though not wise, and wanting wit, yet operated, and very well too, without being able to distinguish the effect from the ultimate cause. This difference of incapacity, or, if you please, of wit, might be fully made out, if, without offence to any, I were permitted to point to the persons; for I have both seen and known many such.



C H A P. III.

The child who has neither wit nor ability requisite to the intended science, cannot prove a great proficient, though he have the best masters, many books, and should labour at it all the days of his life.

CICERO, in order to accomplish his son *Marcus* in that sort of learning he had made choice of for him, thought it would be sufficient to send him to an academy so famous throughout the world, as that of *Athens*, to place him under so great a master as *Cratippus*, one of the most celebrated philosophers of the age, and in a city, which, by the vast concourse of people of all nations met together, must unavoidably furnish him with a multitude of great examples, and novel accidents, that would experimentally instruct him, in his designed studies; yet, notwithstanding all the best methods an indulgent father could take (buying some, and writing other books for him) history informs us that he prov'd a meer blockhead, equally destitute of eloquence and philosophy (nature being often even with the son, for her prodigality to the father): and, indeed, that great orator was mistaken, in imagining that the industry of such a master, the best books, the most refin'd conversation of that famous town, and an unwearied application of mind, together with time sufficient to build his hopes upon, could supply the defects of a soul naturally incapable both of eloquence and philosophy. At length, we find he was disappointed, which is the less to be wonder'd at, being mislead by innumerable instances that flatter'd him with the like change in the disposition of his

his son. Nay, he himself acquaints us, That *Xenocrates* had no genius for the study of natural and moral philosophy, (for *Plato* used to call him his *hopeless scholar*) yet the indefatigable diligence of the tutor, and continued endeavours of the pupil, produc'd an excellent philosopher. He says also of *Cleanthes*, that he was so stupid, that no master would admit him to his school, which shamed the youth to such a degree, that by an assiduous application, he acquired the greatest reputation for knowledge. Nor were there the least hopes that *Demosthenes* should ever succeed in eloquence, who, as authors affirm, was almost a man before he could speak; yet, thro' his own unwearied labours, and the assistance of good masters, he became the greatest orator in the world. And *Tully*, amongst other things, recounts, that he had such an impediment in his speech, that he could not pronounce the letter R; yet, by his address, he so happily overcame it, that it was impossible to discern his former defect; which gave birth to the saying, *That human capacity for studies, resembles a game at tables, where, if the dice run cross, the gamester must supply the want of fortune with his better play.* But, according to my principles, the answer is ready to all *Cicero's* examples. For, as I shall prove hereafter, a slow wit in children, promises a happier progress in their riper age, more than an early acute wit; as a pregnant infancy presages a declining manhood. Had *Cicero* been acquainted with the genuine signs which discover a genius in the first age, he would have found, that *Demosthenes's* stammering, and *Xenocrates's* dulness, were happy indications of a future ability. For, not to rob good masters of the reward of their industry and fatigue, in cultivating rude, as well as docile tempers, yet, if the youth has not a pregnant intellect susceptible of proper rules and precepts appropriated to the art he studies, even the *Roman* orator's diligent care of his son, as also all the prudence of the best of fathers, prove vain and fruitless. Sciences are, in a manner, natural to those only that have proper wits; and masters have no more to do with their scholars, as I take it, than to open the way to learning; for if they have good inventions, by these

these alone they may attain great perfection; otherwise they do but vex themselves and their teachers, and will never arrive at what they pretend to. For, were I myself a master, before I received any scholar to my school, I would sift him narrowly, to find out, if I could, what kind of *genius* he had; and if I discover'd in him a propensity for learning, I would chearfully receive him; but if I found he was not in the least capable of any learning, I would advise him to waste no more time, nor lose any more pains, but seek out some other way to live, that required not such abilities as learning does.

EXPERIENCE exactly agrees with this, for we see a great many scholars enter upon the study of each science, let the master be good or bad, and in the conclusion, some attain to great learning, others to indifferent, and the rest have done nothing throughout their whole course, but lost their time, spent their money, and beat their brains to no purpose.

THE difficulty of accounting for this, would not be great, if we duly reflected, that those who are unapt for one, are fit for another science; and that the most ingenious in one sort of learning, proceeding to another, make nothing of it. I myself can attest the truth of this; for, there were three school-fellows of us, that were set at the same time to learn *Latin*; one took it very readily, the other two could never so much as make a tolerable oration. However, all three fell upon *Logic*; and one that could make no hand of *Grammar*, eagle-like, penetrated into that art, whereas the other two could not advance the least step therein during the whole course. But then again, all three passing to the study of *Astronomy*, a thing very observable, he that could neither learn *Latin* nor *Logic*, in a few days space understood *Astronomy* better than the master that taught him, of which the other two could understand nothing. This was a convincing proof, that each science requires a particular and proper *genius*, which being diverted from that, is insignificant in any other. Admitting this to be true, as no doubt it is, whoever should at this time of day, go into any of our colleges, to sound and examine the abilities of the youth there, he would find
reason.

reason to move many from one science to another, while great numbers of others he would be forced to turn out of doors for dunces, and put others in their places, whose narrow fortunes have condemn'd them to some mechanick trade, tho' by nature, better qualified for learning.

THIS being the case, it is convenient, before the child be sent to school, to sound his inclination, and the natural tendency of his senses, in order to find out what study is most agreeable to his capacity, that he may wholly apply himself to that. We must consider likewise, that there are other qualifications no less necessary than a natural disposition to make a learned man. Therefore *Hippocrates* said, That wit in man may hold some proportion with the earth, and the seed sown in it; for though the soil of itself prove fertile and fat, nevertheless it must be manured, and care taken what sort of seed is most natural to it, for all land is not alike fit for all sorts of grain; some bearing better wheat than barley, other better barley than wheat; and of the same earth, some parts are observed to bring forth brighter and plumper grain than others: nor is this all that a good husband-man is to do, for, after he has till'd the ground in due season, he waits the proper seed-time, which is not to be expected at all parts of the year; and the corn being grown, he clears it of the weeds, that it may multiply and thrive, to produce the expected fruit. So likewise it is requisite the science most natural to the man being known, that he should be set to the study of it in his childhood, which is the fittest time to learn. Besides, as the life of man is short, and arts tedious and toilsome, it is the more necessary to allot time enough for the attainment and exercise of them. The memory of children, says *Aristotle*, resembles a blank paper, and being but young and tender, is capable of any impression; not like that of grown men, which being stuffed with a multitude of objects they have seen in the long course of their life, is not so capable of receiving new ones. For this very reason, says *Plato*, in the presence of our children, we ought never to talk of any thing but true stories and good

good actions, which may excite them to virtue, for whatever they learn at that age, they will never forget.

WHOEVER therefore would learn *Latin*, or any other language, ought to do it in his *tender age*, for if he stays till he arrives at a confirm'd maturity, he will never succeed.

IN the second part of man's age, which is *youth*, some pains should be taken in the art of syllogisms, for then the understanding begins to discover itself; and being inured to the rules and precepts of logic, falls insensibly into more familiar methods of discoursing and arguing in the sciences and disputations.

MANHOOD comes next, when all the speculative sciences may be learn'd, for then the understanding is mature. It is true, *Aristotle*, with some justice, excepts natural philosophy; alledging, that a young man is not sufficiently qualified for that study, because that is a science of higher consideration, and therefore requires a stronger judgment than any other.

THE age adapted for sciences being known, a proper place to learn them in should be forthwith sought after, where they teach nothing else, as at the academies; for the youth must be removed from his father's house, because the fondness of his relations and friends are great impediments to study. Which is very visible in such scholars as are natives of those cities and places where universities are seated, very few of whom ever prove learned. But this might be easily remedied, by sending the natives of *Oxford* to study in *Cambridge*, and those of *Cambridge* to *Oxford*. To abandon one's native place to be made wiser and worthier, is of such importance, that no master in the world can teach one a more useful lesson.

THE third caution is, to find out a master of a clear head, and good method in teaching, of solid and sound learning, without sophistry or trifling; for all that the scholar has to do during the time he learns, is to receive all the master propounds, because he has neither wit nor discretion sufficient, at the tender years which is necessary for him to be initiated into learning, to discern or distinguish between right and wrong.

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THE fourth consideration to be made use of, is, to study the science with *order*, beginning at its very *principles*, passing through the middle to the end, not making those first principles, which presuppose others. For this reason, it was ever esteemed a fault to hear several lectures on divers subjects, and to carry them home promiscuously; leaving, by this means, such a medly of things on the mind, that when they come to be put in practice, a man can have no recourse to the precepts of this art, because they are not in any convenient order: It is much better to take some pains in each distinct study, in a method most natural to its institution, because the same way it is acquir'd, it will be still retain'd in the memory. And more particularly it is necessary this be observ'd by such as have naturally a confus'd understanding, which may be easily remedied, by hearing one thing at once, and that being over, to proceed to another, and so till the whole art be run through. *Galen*, well knowing of what importance it was to study the matter with method and order, writ a book on purpose to direct the method which ought to be observ'd in reading his works, to the end the physician might not be confounded. To this others add, That a scholar, in learning, should never have more than one book, in which is clearly contain'd the point he studies, and apply himself to that alone, and not to many, lest he should be confounded and perplex'd; and so far they are in the right.

THE last thing that makes a very learned man, is to spend much time in study, to wait patiently its digestion, and to allow it good settlement; for even as the body is not nourished by the quantity of what we eat or drink in a day, so much as by the quality of it, when it is assimilated and digested by the stomach; so our understanding is not improv'd by the great deal we read in a short time, but by what we understand by little and little, and pause upon between whiles. Wit, like plant, animal, and man, has its several stages, that is to say, its beginning, progression, perfect state, and declension: It springs in childhood, grows up in adolescence, comes to a consistence in the middle-age, and declines

declines in old age. So that he, who would know when his understanding is at the pitch of perfection, may be assur'd 'tis between thirty-three, and the end of fifty years, more or less. And whoever would write books, should do it at that very age, not sooner, or later, unless he would eat his words, or change his opinion.

HOWEVER the age of man holds not in all people the same measure and proportion; for in some, childhood draws to a period in the twelfth; in others, not till the fourteenth; in some, it determines the sixteenth; and in the rest, not till the eighteenth year. These live long, because their youth reaches to little less than forty; and their manhood holds on to sixty years. Besides which, they have twenty years of old age; whence their thread stretches to eighty; which is the usual limit of the healthiest. The first that finish their childhood at twelve years, are very short-liv'd, begin early to discourse, their beard comes soon, and their wit lasts but a little time; these ordinarily decline at thirty-five, and end their days at eight and forty years.

THERE is not one of all the qualifications already mention'd, but what is very necessary, useful, and convenient to be observed, that the young student may come to something; but above all, to possess a *genius* suitable to the science he is to study. For, with this, we have observ'd, that many men who have begun to study in a far-spent age; nay, though they have met with bad masters, an ill method, and studied in their native country; yet, notwithstanding all these disadvantages, have, in a short time, prov'd very learned men. *Baldus* is an excellent instance of the truth of this observation; who coming to study the law in his old age, was laugh'd at, and told, *Sero venis, Balde, in alio seculo eris advocatus*: yet, having a *genius* adapted to that study, he prov'd, in a short time, a very extraordinary lawyer. *Nature*, says *Hippocrates*, is the most necessary condition of all, by assistance of which, those that apply themselves to arts, penetrate thoroughly. No man confirms the truth of this better than *Tully*; who full of grief to see that nothing could make his son a scholar, express'd himself after this manner, *To strive against nature,*

ture, what is it but giant-like to make war with the gods? As if he would have said, what more resembles the giants war with heaven, than for an insipid to set up for a man of parts? For, like as the giants never conquer'd the gods, but were always baffled by them, even so empty pretenders to learning, that strive against nature, will, in the end, have the worst of it. And the same author advises us not to offer violence to nature, nor attempt to be orators in spite of her, for it will be but lost labour. This leads me to inquire what that nature is, which qualifies a man for learning.



C H A P. IV.

That nature only qualifies a man for learning.

IT is a common saying, and much used by the ancient philosophers, That nature qualifies man for learning: art with its rules and precepts facilitates, but use and experience of particulars gains the mastery. But no man has yet declared what this nature is, nor in what class of causes it ought to be rank'd; they only affirm, *Whoever pretends to learning, and wants that alone, arts, experience, masters, books, and industry prove all in vain.* There is a great contest between the natural philosophers, and the vulgar, about assigning the cause of this effect: The vulgar observing a man of great abilities, immediately declare God to be the author of them, without giving themselves any further trouble; and with good reason, because, in effect, *every good and perfect gift cometh from above.* There is no natural cause, say the philosophers, can produce effects arm'd with such force and energy as God: So far they are all agreed, that the first cause heats more than fire, refreshes more than

than water, illuminates more than the sun himself, and in our particular formation, 'tis that which presides over nature, and that dispenses or denies wit to men. Which consideration made the royal prophet cry out, *Thy hands have made me and fashioned me; give me understanding that I may learn thy commandments.* A natural philosopher being in discourse one day with a grammarian, a curious gardener came up to them, and asked them, What was the reason, that having taken such pains with the earth, to dig, to sift, to cleanse, and dung it, yet it never brought forth so good seed as he sow'd; whereas the plants it produc'd of its own accord, grew up with a great deal of ease? The grammarian answer'd, it came to pass by the divine providence, which had so dispos'd it, for the good government of the world. But the natural philosopher fell a laughing at that answer, seeing he had recourse to God, as being ignorant of the connexion of natural causes, and in what manner their effects are produced. The other seeing him laugh, ask'd him, if he ridicul'd him? The philosopher answer'd, It was not him, but the master that had taught him no better; for the gardener's question was natural, seeing the plants the earth produces of her self, come out of her own bowels; and those the gardener raises, are forc'd by art, and are the daughters of a strange mother; and therefore, like an unkind step-mother, she communicates not to them the virtue and nourishment that should make them thrive.

HIPPOCRATES confirm'd this in the visit he made to the great philosopher *Democritus*, who acquainted him with the false notions the people had of physick, who had nothing in their mouths, but that God had healed them, and if it had not pleased him, the physician's care and skill had been all employed to no purpose, and the like. This is the old way of talking, and which has so often been in vain exploded by the naturalists, that it is not worth while to endeavour to silence it; neither is it altogether convenient, because the vulgar, who are not acquainted with the particular causes of any effect whatever, answer better, and with more truth, from the universal cause, which is God,
than

than to run into impertinences. But let us talk at what rate we please, God is always understood to be the author, even of nature; for when *Aristotle* said, *God and nature make nothing in vain*, he never meant that nature was an universal cause, having a power independent upon God, but a name only of that order and subordinate rule appointed by God himself in the creation of the world, to the end that such effects might duly succeed, as were necessary to its conservation and continuance in the same state; for the natural order of the universe, by us called nature, from the creation to this day, has suffer'd no change or alteration in the least; for God made it with so much wisdom and prudence, that not to continue constant in that order, would be tacitly to lay a blame upon his works.

BUT as what we have said on this head, is too loose and confus'd a signification of nature, we will endeavour to find out another meaning of this word, which may be more accommodated to our purpose.

ARISTOTLE, and all other natural philosophers, were more particular, calling nature, every substantial form that gives being to a thing, and is the principle of all its operations. In which sense, our rational soul, with good reason, is call'd nature, for from thence we receive the form and being we have of men, and the same is the principle of all our actions; for all rational souls are of equal perfection, as well the wise man's as the fool's, and so we may not pronounce, that it is nature, in this sense, makes a man witty; for if that were true, all men would be equal in wit and capacity, and thereupon the same *Aristotle* found out another signification of nature, importing the reason and cause of a man's being capable or incapable; saying, that the temperament of the four first qualities (heat, cold, moisture, and dryness) were to be call'd nature, inasmuch as from them proceed all the abilities of men, all the virtues and vices, and all the great variety of wit we discover in the world. And he proves it clearly, by considering the several parts of the age of the wisest man, who, in his childhood, is little more than a brute beast, employing no other powers than the irascible and concupiscible; when youth

youth comes, he betrays an admirable wit, which we see continues to a certain period, and no longer; for old age drawing on, his wit every day declines, till in the end it is wholly lost. Assuredly the diversity of wit proceeds not from the rational soul, for that in all ages is the same, without suffering any alteration in its vigor or substance, except a man in the several stages of his life changes his constitution, or has a different disposition; and from hence is it that the soul acts one part in childhood, another in youth, and yet another in old age; whence may be drawn an evident argument, that seeing the same soul performs contrary acts in one and the same body, by having in each division of age, a different temperament; whensoever of two boys, the one is witty, the other a dunce, the same happens by each having a different temperament from the other, which (being the principle of all the operations of a reasonable soul) is by physicians and philosophers call'd Nature; in which sense this saying, *Nature makes able*, is properly verified. In confirmation of which doctrine, *Galen* wrote a book, proving, that the operations of the soul were influenc'd by the temperament of the body, in which it dwelt; and that by reason either of heat, cold, moisture, and dryness of the climate where they lived, or the qualities of the meat they eat, and of the waters they drank, and of the air they breathed in, some were fools and others wise; some stout and others cowards; some cruel and others gentle; some reserv'd and others open, some lyars and others speakers of truth; some traytors and others loyal; some turbulent and others calm; some crafty and others sincere; some sordid and others generous; some modest and others impudent; some incredulous and others credulous; in proof of which, he quotes many places out of *Hippocrates*, *Plato*, and *Aristotle*, asserting, that the diversity of nations as to the frame of their bodies, and the turn of their souls, was owing to this difference of temperament. And 'tis found true by experience, how much the *Greeks* differ from the *Scythians*; the *French* from the *Spaniards*; the *Indians* from the *Germans*, and the *Ethiopians* from the *English*. Finally, altho' *Galen* did not arrive at the particular discussion of

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the difference of wits amongst men, yet he knew full well it was necessary to make a repartition of the sciences among the youth, and to assign to each, that which was most suitable to his genius; when he said, *That well-order'd republicks should employ men of great wisdom and knowledge, who in their growing years should sound the wit and natural application of each, so to engage them to learn the art most agreeable to them, not leaving it to them to act at their own choice.*



C H A P. V.

What power the temperament has to make a man wise and good-natur'd.

HIPPOCRATES, in consideration of the good disposition of our rational souls, and how frail and changeable human bodies are wherein they reside, deliver'd a sentence worthy so great an author: *Our rational soul is always the same, throughout the whole course of our life, in youth and in age, when we are children, and grown men: The body, quite contrary, never continues in one state, nor is there any means to keep it so; for childhood is, and will be, hot and moist; youth, temperate; manhood, hot and dry; middle-age, moderate in heat and cold, but inclining to driness; and old-age, cold and dry; therefore he said, When the four elements, but more especially fire and water, enter the composition of man's body, in the same proportion and measure, the soul becomes very ingenious, and endued with an excellent memory; but if the water exceed the fire, it proves stupid and dull, not so much through any defect of her own, as from the depravity of the instrument wherewith she acts. Which Galen weighing well, boldly concluded, that all the inclinations and dispositions of a rational soul,*
follow'd

follow'd without doubt the constitution of the body with which she was cloathed; and proceeding yet farther, he blames the moral philosophers for not studying physick, seeing tis certain, that not only prudence, which is the foundation of all the virtues, but also fortitude, justice, and temperance, with their opposite vices, depend in great measure on our constitutions; therefore he said, *It was the employment of physick to expel vices from man, and to introduce their contrary virtues*: so that he has left us an art to extinguish lust, and to promote chastity; to render the proud more pliant and tractable; the covetous, liberal; the coward, valiant; the ignorant, wise and knowing: and all the care he employs to obtain his end is, only to correct the ill constitution of the body, by the assistance of physick, and a regimen corresponding to each virtue, and contrary to each vice, without any regard in the least of the soul; pursuant to the opinion of *Hippocrates*, who openly declar'd, the soul was not subject to any change, and stood in need of no power to acquit herself of those ties she was under, provided she had good organs: whereupon he conceiv'd it was little less than an error, to seat the virtues in the soul, and not in the organs of the body, by which the soul acted, and without which he thought no virtue was to be acquired, except by introducing a new temperament.

BUT this opinion of his is erroneous, and contrary to that ordinarily received by the moral philosophers, that the virtues are spiritual habits, having their seat in the rational soul; for such as the subject is, such must be the accident which is received: moreover, that the soul being the agent and mover, and the body the patient which is moved by it, it is much more to the purpose to place the virtues in the agent, rather than in the patient.

AND were the virtues and vices such habits as depended purely on the constitution, it might thence be concluded, that man acted only as a natural agent, and not as a free one; for so he would be inevitable sway'd, in proportion to the good or bad disposition attending his constitution, and by consequence his best actions

would deserve no reward, nor his worst any punishment, according to the saying, *That as to things which are natural to us, we can neither merit nor demerit.* But on the contrary, we see a great many persons who fail not to be virtuous, in spite of a constitution that is vicious and deprav'd, and such as rather disposes them to evil than good, according to that saying, *That a wise man is superior to the ill influences of heaven:* and for what concerns wise and discreet actions, we see many indiscretions committed by very wise and well-temper'd men; as on the other side, not a few discreet actions performed by persons that are not so; and who are of no happy constitution. Whence we may collect, that prudence and wisdom, and other human virtues, are from the soul, and depend not at all upon the composition or frame of body, as *Hippocrates* and *Galen* have vainly imagin'd.

BUT as it may seem strange, that these two great physicians, and with them *Aristotle* and *Plato*, were of the same opinion, and all without truth; we are to take notice therefore, that the perfect virtues, such as the moral philosophers treat of, are spiritual habits, which have place in the rational soul, and whose being is altogether independent upon the body. From which it is evident, there is in man neither virtue nor vice, (I say nothing of supernatural virtues, as being not of this rank) that has its proper temperament of body, either to facilitate or retard him in his actions; this temperament then, the moralists improperly call virtue or vice, considering that men, ordinarily speaking, betray no other inclinations than those mark'd out by this temperament. I say, ordinarily speaking, because in effect many mens souls are fill'd with perfect virtue, although the organs of their body afford them no temperament subservient to accomplish the desires of the soul; and yet nevertheless, for all that, by virtue of their free-will, they fail not to act like good men, though not without some struggle and reluctance: according to which *St. Paul* has said, *I delight in the law of God after the inward man, but I see another law in my members warring against the law of my mind, and bringing me into captivity to the law of sin, which is in my members.* O

wretched

wretched man that I am ! who shall deliver me from the body of this death ? I thank God through Jesus Christ our Lord. So then with the mind I my self serve the law of God, but with the flesh the law of sin. In which words St. Paul gives us to understand, that he felt within himself two laws, wholly opposite; one in his soul, which made him to love God's law, the other in his members, which led him to sin.

WITH such like inclinations as these, virtuous persons find it a hard task to live well, and not without reason was it said, *That the road to virtue was cover'd over with thorns*: but if the same soul that is bent upon meditation, meets a brain hot and dry, which are the dispositions peculiar to watching; and if, when it attempts to fast, it finds a stomach hot and dry, of which constitution, according to *Galen*, the man is that loaths meats; and if when it aims to embrace chastity, it meets the parts cold and moist, without doubt it will accomplish the several purposes without any struggle or reluctance whatever, because the law of the mind and the law of the members exact both the same thing, and such a man, in such a case, may act virtuously, without any violence to his nature.

ARISTOTLE knew well, that a good temperament made a man prudent, and of a good disposition; which occasion'd him to say, *That the good temperament did not only affect the body, but also the mind of man*: but he has not shewn what this good temperament was; on the contrary, he asserted, *That mens dispositions were founded upon hot and cold*: but *Hippocrates* and *Galen* exclude those two qualities as vicious, approving the equality of temperament, where the heat exceeds not cold; nor the moisture, driness; which made *Hippocrates* say, *If the great moisture of the water, and the excessive driness of the fire, are equally temper'd in the body, the man will be very wise*. Nevertheless, many physicians, because of the great reputation of the author, upon enquiring into this temperament, have found that it does not answer what *Hippocrates* promised; but on the contrary, their opinion was, that those who had it were weak men, and of little vigor, and did not express

in their actions so much conduct as those of an ill constitution; altho' indeed they are of a very sweet and affable temper, and inoffensive to every man in word and deed, which makes them pass for very virtuous, and void of those passions which raise tempests in the soul.

THESE physicians disapprove the equal temperament, inasmuch as it disables and flats the force of the spirits, and is the cause they do not act freely as they ought; which appears evidently in two seasons of the year, the spring and autumn, when the air falls out to be temperate, for then usually happen diseases; insomuch that the body is observed to be much more healthful when it is either very hot or very cold, than during the mediocrity of the spring time.

FOR my own part, I believe cold is of the most importance to the rational soul, to preserve its virtues in due peace, and to prevent all undue ferments amongst the humours; for *Galen* says no less, there is no quality so much blunts the concupiscible and irascible faculty as cold, nor that so powerfully excites the rational faculty, as *Aristotle* assures us that does, especially if it be joined with driness; for this is certain, as the inferior part is disabled or depressed, the faculties of the rational soul in the same proportion are exalted and enlarged.

WHEREUPON *Aristotle* proposed this question: *Why those who are in fear falter in their speech, tremble with their hands, and hang their lips? It is* (says he) *because this passion is a defect of heat, which commences from the parts above: whence also comes the paleness of the face.*

ABSTINENCE likewise is one of the things which chiefly mortifies the natural heat, leaving the man cold: for our nature is supported, says *Galen*, by eating and drinking, in the same manner, as the flame of the lamp is fed by the oil; and there is so much natural heat in the body that has digested flesh-meats, that they afford him nourishment in proportion to his heat, and if they should yield him less in quantity, his heat would insensibly diminish; and this made *Hippocrates* forbid the letting of children fast, because their natural heat evaporated and wasted for want of being fed.

proper for different Capacities. 31

As for sleep, *Galen* says, it's one of the things which most fortifies our heat, for by its means that insinuates into the hidden recesses of our bodies, and animates the natural virtues; and much after the same manner our food is assimilated and turned to our substance; whereas waking generates corruptions and crudities; and the reason is, because sleep warms the inward parts, and cools the outward; as on the contrary, waking cools the stomach, liver, and heart, which are the vitals, and inflames the external parts, the less noble, and less necessary: hence he that does not sleep well, must needs be subject to many cold diseases. *To lie hard, to eat but once a day, and to go naked, Hippocrates* said was the utter ruin of the flesh and blood, wherein the natural heat is plac'd. And *Galen* giving the reason why a hard bed weakens and wastes the flesh, said, *That the body was in pain, and suffer'd deeply for want of sleep, and that by the uneasy changes of motion from side to side, it was harass'd by restless nights.* And how the natural heat decays, and is dissipated by bodily labour, the same *Hippocrates* declares, teaching how a man may become wise; *In order to be wise, a man must not be oppress'd with too much flesh, for that belongs to a hot temperament, which is the quality that destroys wisdom.* Prayer and meditation, cause the heat to mount up to the brain, in the absence of which, the other parts of the body remain cold, and if the intention of mind be great, they soon lose the sense of feeling, which *Aristotle* affirmed to be necessary to the being of animals, and that the other senses, in comparison of that, served only for ornament and well-being. For, in effect, we might live without tasting, smelling, seeing, and hearing; but the mind being busied in some high contemplation, fails to dispatch the natural faculties to their posts; without which, neither the ears can hear, nor the eyes see, nor the nostrils breathe, nor the taste relish, nor the touch feel; insomuch as they who meditate are neither sensible of cold, heat, hunger, thirst, nor any weariness whatever: and feeling being the sentinel that discovers to a man the good or ill done him; he cannot be without it: so that being frozen with

cold, or burnt up with heat, or dying away with hunger or thirst, he is not sensible of any of these inconveniencies, because he has nothing to report them to him.

IN such a state, *Hippocrates* says, the soul neglects its charge, and whereas its duty is to animate the body, and to impart to it sense and motion, yet nevertheless it leaves it wholly destitute and unprovided of any succours. They who are hurt in any part of the body, and feel no pain, assuredly are distemper'd in mind.

BUT the worst disposition observed among men of learning, and those that are devoted to studies, is a weak stomach, because the natural heat required for digestion is wanting, that very heat being usually carried to the brain, which is the cause the stomach is filled with crudities and phlegm: for which reason *Celsus* recommends it to the physician's care to fortify that part in men of meditation more than any other, because prayer, meditation, and hard study, extremely cool and dry the body, rendering it melancholy: for which reason, *Aristotle* demanded, Whence it is we see all that have excelled, whether it be in the study of philosophy, or government, or the poets, or in any other art whatsoever, have been melancholy.

BUT the quality observed to be best for the rational soul, is the cold constitution of body. This is easily prov'd, if we run through the several stages of man's life, infancy, youth, manhood, middle-age, and old-age; for we find, that because each age respectively has its particular temperament, accordingly at one time a man is vicious, at another virtuous; in one he is indiscreet or perverse, and in the other wise and better advis'd. Infancy is nothing else but a hot and moist temperament, in which *Plato* said, the rational soul was, as it were, plunged and stifled, not being able freely to employ the understanding, will, or affections, till in length of time it passes to another age, and has gain'd a new temperament. The virtues of infancy are very many, and the vices but very few; they are docile, tractable, gentle, and easy to receive the impression of all kinds of virtues; they are bashful, and full of fear, which, accord-

according to *Plato*, is the foundation of temperance; they are credulous and easy to be led; they are charitable, frank, chaste, humble, innocent, and undesigning; to which virtues *Jesus Christ* had regard, when he said to his disciples, *Except ye become as little children, you shall not enter into the kingdom of heaven.* *Hippocrates* divided infancy into three or four stations, and because children from the first to the fourteenth year always admit abundance of humours, and a variety of temperament; so likewise they are subject to divers diseases, and their souls at the same time are not without a great many different virtues and vices: in consideration of which, *Plato* began to instruct a child from the very first year, although he could not then speak, directing his nurse, how to distinguish by his laughing, his tears, and even his silence, his virtues and vices, and how she should correct them.

YOUTH, which is the second age of man, is reckoned from the fourteenth to the five and twentieth year; this age, according to the opinions of physicians, is neither hot nor cold, nor moist nor dry, but temperate, and in a mediocrity of all the qualities; the parts of the body in this temperament are such as the soul requires for all sorts of virtues, and especially for wisdom. The virtues we have allotted to infancy, seem to be acts proceeding from meer instinct of nature, like those of ants, serpents, and little bees, which act without reason; but those of youth are perform'd with judgment and discretion; so that he who acts at that age, discerns what he does, and with what design, and knowing the end, he accordingly disposes the means that lead to it. Where the holy scripture says, *That the heart of man was inclined to evil from his youth*; that is to be understood exclusively, that is to say, from the time he passes from infancy to youth, which are the most virtuous ages of man's life.

THE third age is manhood, which is reckoned from twenty-five to thirty-five years; its temperament is hot and dry, of which *Hippocrates* said, *When the fire exceeds the water, the mind becomes mad and furious*; and experience no less confirms it, for there is no ill

which a man is not acquainted with, and tempted to at that very time: passion, gluttony, lechery, pride, murders, adulteries, thefts, and rapines; rash designs, vanity, tricks, lyes, quarrels, revenge, hatred, indignities, and insolence, are the fairest inheritance of these; at which age *David* perceiving himself to be, cried out, *Lord, cut me not off in the midst of my days*: for manhood is the middlemost of the five ages of man's life, which are infancy, youth, manhood, middle-age, and old-age.

FROM all which it is no less evident, that the soul may in some sense deserve excuse, if she makes any false steps, because in manhood the body is more intemperate, which occasions the soul to incline with more difficulty to what is virtuous, and with more ease to what is vicious. 'Tis to the very letter what the wise man intimates; *I had for my lot a good soul, and from my infancy I appeared of great wit, and still growing wiser and wiser, (which is to be understood of his youth) I had nevertheless a filthy and intemperate body (such an one is in manhood,) and I found at the end of the account, that man could not be chaste or continent, were it not for the special grace of God.* Whereupon *David* remembring what had past in so dangerous an age, said, *Remember not the sins of my youth, nor my transgressions.*

AT the fourth age, which is the middle-age, man returns to be more temperate, because in proceeding from hot to cold, he must necessarily pass through the intermediate degrees by which, with that driness that manhood has left in the body, the soul is made wise. Whence it comes that men who have lived fast in their younger days, are subject to the great changes we see every day appear, when they recollect their ill-spent days, with endeavour to amend them. This age begins from thirty-five years, and reaches to forty-five, more or less, in proportion to the temperament and complexion of each respectively.

THE last age of man is old-age, in which the body is cold and dry, subject to a thousand ills and infirmities; all the faculties are besotted, and disabled in performing

forming their ordinary functions; but because the rational soul is still the same in infancy, youth, manhood, middle-age, and old-age, without receiving any change to diminish its powers, therefore when it reaches this last age, and to this cold and dry temperament; it is just, prudent, strong, and endued with temperance; and though we ought to attribute these virtues to the whole man, yet is the soul allow'd to be the first mover, according to this, *That the soul is the principle from which we understand*. So long as the body is vigorous and active in its vital, natural, and animal faculties, man is but very slenderly provided with moral virtues; but as that comes to lose its strength, the soul strait advances in virtues. St. Paul seem'd to insinuate no less in these words, *For when I am weak, then am I strong*. And assuredly this is very true, because the body in no age is weaker than in old-age, nor the soul more ready to perform such actions as are conformable to reason.

NOTWITHSTANDING all which, *Aristotle* always reckon'd six vices incident to old men, from the coldness of age: the first, that they are *cowards*, because courage and valour have great fire in them, and a large stock of blood, of which old men have but very little, and that little too congeal'd: the second, that they are *covetous*, and, that they guard their treasure more carefully than they need; for though they find themselves arrived at the last stage of their lives, and that reason should teach them, where the journey is short, the charge of defraying it is small, their avarice nevertheless and their thrift fail not to haunt them, as if they were but yet in their infancy, and they were to run through no less than all the five stages of their lives, and that it is good to store, as if they were always to live. The third, that they are *suspicious*; but I cannot imagine why *Aristotle* calls this a vice, since it is certain, that it proceeds from the experience they have had of so many tricks in the world, and also from recollecting what part they themselves acted in their younger days, that they are ever upon their guard, as knowing full well how little trust is to be repos'd

in men. The fourth, that they are *diffident*, and of small hopes, never promising themselves success in their affairs, and of two or three designs they may have, they always fall upon the worst, and upon that lay out all their application. The fifth, that they are *shameless*, because, as *Aristotle* says, bashfulness and blushing are full of blood, of which old men have so little, as by consequence they are without shame. The sixth, that they are very *incredulous*, thinking that the truth is never told them, because their memories are so fresh of the juggling and deceits they have met with in the world, during the past course of their lives.

YOUNG children have, as *Aristotle* has noted, all the virtues quite contrary to these vices; they are fearless, frank, not distrustful in the least, always full of hopes, very bashful, easily persuaded and imposed upon.

THE same things we have evidenc'd in the several ages of man's life, we might also shew in the difference of sex, what virtues and vices man has, and what woman, as well by reason of humours, blood, choler, phlegm, and melancholy; as also from the diversity of climates, and particular countries. In one province the men are valiant, in another cowards; in this deliberate, in that rash; in one lovers of truth, in another lyars. And if we run through all the variety of meats and drinks, we shall find that some feed this virtue, and starve that vice; and others, on the contrary, nourish such a vice, and depress such a virtue; but in such a manner, as the man nevertheless still remains free to chuse as he pleases; according to that, *He hath set fire and water before thee, stretch out thy hand unto which thou wilt*; for there is no constitution can do more than incite the man, without forcing him, if he loses not his reason; and it is to be observed, that in studying, and contemplating things, man acquires another temperament besides what belongs naturally to the constitution of his body; for, as we shall prove hereafter, of the three powers a man has, the memory, common sense, and imagination, the imagination only, as *Aristotle* has noted, is free to frame what it pleases; and by the operations of this faculty, *Hippocrates* and *Galen* say,

say, the vital spirits, and the blood of the arteries are always set on work, and in motion; she dispatches them where it seems good to her, and the parts to which the natural heat flies, become thereby more effectual to perform their functions, and other parts weaker; for let any be put to the blush at an offence taken, the natural heat strait mounts up, all the blood flying to the heart to fortify the irascible faculty, and to depress the rational. But if we proceed to consider, that God enjoins us to forgive injuries, and do good to our enemies, and to reflect a while upon the recompence attending it, all the natural heat and blood strait rises up to the face, to strengthen the rational, and debilitate the irascible faculty; and so it being at our choice, with the imagination to fortify what faculty we please, we are justly rewarded when we strengthen the rational and disable the irascible faculty; and as fairly punished, when we raise the irascible, and depress the rational faculty. From which we may judge, with how good reason the moral philosophers recommend to us the study and consideration of divine matters, since by these means alone we might acquire the temperament and strength which the rational soul has use of, as well as suppress the inferior part. — But I cannot forbear adding one thing before I end this chapter, which is, that a man may exercise all the acts of virtue, without having that advantageous constitution of body required, although not without great pain and difficulty, acts of prudence excepted; for if the man be by nature imprudent, nothing but God can cure it with a remedy; the same is to be understood of distributive justice, and of all the acquir'd arts and sciences.





C H A P. VI.

What part of the body ought to be well tempered, that the child may be witty.

THE body of man having so great a difference of parts and powers (each destin'd to its end) it will be highly necessary, above all things, to know what part nature has contriv'd as the principal instrument to dispose a man to be wise and prudent: for it is certain, that each part has its proper use, and a particular composition for the office it is to discharge.

THAT the heart is the chief seat where reason resides, and the instrument by which our souls perform the actions of prudence, memory, and understanding, was a received opinion amongst the natural philosophers before *Hippocrates* and *Plato* were born. The heart is therefore stiled the superior part of man in many places of sacred writ, which accommodates itself to the way of speaking in use at that time. But those two great philosophers have given us to understand, that this opinion is false, and with great reason and experience have proved the brain to be the chief seat of the rational soul; and thus it was generally receiv'd, *Aristotle* only dissenting, who revived that old opinion, endeavouring, by topical arguments, and several conjectures, to make it probable, for the sake of contradicting *Plato* in every thing. Not to dispute which is the truest opinion (for in our days there is not a philosopher but allows the brain to be the instrument by nature design'd to make a man wise and prudent) it will only be requisite to lay down the conditions whereby that part is best organiz'd; that the youth may thereby become towardly and witty.

THAT

THAT the rational soul may conveniently perform the actions of understanding and prudence, there are required four qualifications of the brain: I. Good configuration. II. Unity of parts. III. That the heat exceed not the cold, nor the moisture surpass the driness. IV. That the substance of the brain be composed of very fine and delicate parts.

FOUR other things are compriz'd under the good configuration. 1. A good figure. 2. Sufficient quantity. 3. That there be four separate and distinct ventricles in the brain, each disposed in its proper place. 4. That its capacity should not be greater nor less than is convenient for its functions.

WE are taught by *Galen* to know when the figure of the brain is good, for in reflecting on the outward form and figure of the head, he declares, it is as it ought to be, if it resembles a ball of wax made exactly round, and compress'd gently on each side; the turn of the forehead, and the hind-part of the head a little jetting out; whence it follows, that the forehead and hind-part of the head very flat, are a sign the brain has not the figure approved for a sharp wit and ability.

WHAT is most to be admired is the quantity of brains the soul has occasion to make use of for reason and discourse; because not one amongst all the brute-animals has so much as man: insomuch, that if the brains of two very large oxen were joined, they would not so much as equal the brains of one man; and what is yet more observable, is, that amongst brute beasts, those who approach nearest to man in wit and cunning (as the monkey, the fox, and the dog) have still a greater quantity of brains than other animals, although of much greater bulk; which made *Galen* say, that a little head in man was always defective, because it wanted brains; as he also affirm'd, it was no less an ill indication, to be born with a great jolt head, because it was all flesh and bones, with very little brains; as it often fares with very large oranges, which when they come to be opened, have little juice and pulp, but a very thick rind. Nor is any thing more grievous

the rational soul, than to be plung'd in a body overstock'd with bones, with fat, and with flesh. *It is absolutely necessary, says Hippocrates, for a man that would be very wise, not to be oppress'd with much flesh, nor fat, but rather to be lean and slender: for the fleshy temperament is hot and moist, with which 'tis impossible, or at least very improbable, but the soul should become blockish and stupid.* Chrysippus declares, that the soul of a very fat man, can be of no other use to him than salt to preserve his body from stinking. Aristotle confirms this opinion, affirming, that man to be a sot that had an over-great head and fleshy, comparing him to an ass, because, in proportion to the other parts of his body, there is no beast's head so very fleshy as that of an ass.

BUT as to corpulence, it ought to be observ'd, gross men are of two sorts, some abounding with flesh and blood, whose temperament is hot and moist, as others again, who have not so much flesh and blood as they are cramm'd with fat, are of a cold and dry constitution. Hippocrates's opinion is to be understood of the first, because of the great heat and humidity, and the abundance of fumes and vapours arising without intermission in those bodies, which cloud and overthrow their reason; which is not the case of the other, that are only plump and fat, whom the physicians dare not bleed, because they have too little blood; and there is ordinarily abundance of wit to be found, where there is not so much flesh and blood. That we may thoroughly understand the great agreement and correspondence between the stomach and the brains, especially in what relates to wit and cunning, Galen has declared, *A gross paunch makes a gross understanding*: but if he means this of those that are fat, he has less reason, for they have a very waterish wit. Persius proceeded upon this reason, when he said, *That the belly gave wit.*

PLATO affirmed, there is nothing darkens the soul so much, nor more over-casts the brain, than the black fumes and vapours arising from the stomach and the liver at the time of digestion; nor is there on the other hand, any thing that elevates it to such high medi-

meditations as fasting and a spare body, not overcharg'd with blood. Moreover, *Plato* affirms, that the heads of wise men are ordinarily tender, and apt to be annoy'd upon the least occasion; and the reason why nature has made them of so delicate a head, seems to be for fear of loading them with too much brains to the diminishing of their wit. So true is this doctrine of *Plato*, that tho' the stomach be far from the brain, nevertheless it annoys it, if it be overcharg'd with fat and flesh: nor is there any mystery in this, because the brain and the stomach are knit and tied together by means of certain nerves, which communicate their disaffections to each other; and, on the contrary, if the stomach be dry and empty, it much sharpens the wit, as we may see in those who are pinch'd with hunger and want.

BESIDES all this, it is requisite that there be four ventricles in the brain, to enable the rational soul to reason and discourse; one disposed on the right, the other on the left side, the third in the middle, and the fourth in the hinder part of the brains, as appears from anatomy. Hereafter, when we shall treat of the difference of wits, we shall shew what use the rational faculty makes of these ventricles, be they greater or less.

THAT the brain be well-figur'd, of sufficient quantity, and the number of ventricles so many, little or great, as we have shewn, is not yet enough. Its parts must also observe a kind of continuity, without being disjoyn'd; for which cause we have observed some men wounded in the head have lost their memory, others their common sense, and others their imagination; nay, even though the brain after cure has been rejoyn'd by art, because there was not the same natural union as before.

THE third of the four principal qualifications, is, that the brain should be temperate, of a moderate heat, and without excess of the other qualities; which disposition of the brain we have already affirm'd to be that, call'd true temper, for 'tis that which makes a man capable, and the contrary otherwise.

THE fourth, that the brain should be composed of very fine and delicate parts, and is what *Galen* thought the

the most important qualification of all the rest. For giving an indication of the good composition of the brain, he says, that the sharp wit shews the brain to be formed of very subtle and delicate parts; but if the understanding be dull, it denotes the brain to be composed of a gross substance; where he takes no notice of the temperament.

To the end the rational soul might by this means reason well, the brain ought to have these qualities. But here arises a great difficulty, which is, in the opening the head of any beast whatever, we shall find his brains composed after the very same manner as man's, without being wanting in any of the conditions mention'd. To which it is answered, That in this, man and brute beasts agree, in having a temperament of the four first qualities, without which 'twould be impossible for them to subsist; so they are composed of the four elements, fire, air, water, and earth, whence spring and proceed heat, cold, moisture, and driness. In the actions of the vegetative soul they also agree; accordingly nature has given to both alike organs and instruments necessary for nourishment; such are the right fibres, traverse and oblique, subservient to the four natural faculties. They also conspire in the sensitive soul, for so they have nerves and sinews alike for the instruments of sense. In local motion they also agree no less; thus have they both muscles, as fit instruments directed by nature to move from place to place. They also accord in memory and fancy, for so have they both brains, as an instrument subservient to those two faculties, that are alike composed in both. The understanding is the sole faculty that distinguishes man from beast, and because the understanding acts without any corporeal organ, or depends not on the same for its being or preservation, therefore nature had no need of a new turn in the composition of man's brain: however, the understanding hath occasion for other faculties to operate, which faculties likewise have the brain for the instrument of their operations. We add farther, that the brain of man requires the conditions we have laid down, to the end the rational faculty may by means thereof perform opera-

operations every way agreeable and conformable to its species. As to brute-beasts, it is certain, they have memory and fancy, and some other power that apes the understanding, even as a monkey apes a man.

CH A P. VII.

That the vegetative, sensitive, and rational souls are knowing, without being directed by teachers, when they meet with a temperament agreeable to their operations.

THE temperament of the four first qualities, which we have already call'd nature, hath force sufficient of it self, to leav; the plants, the brutes, and man unprovided of nothing wherewith to act well, each according to his species, and to arrive at the highest perfection each is capable of; for without any teacher, the plants know how to spread and take root in the earth, to draw nourishment, to keep it, to digest it, and throw off the excrementitious parts; and brute beasts know, as soon as ever they are brought into the world, what is agreeable to their nature, as well as to avoid what is evil and noxious. And what most astonishes those that do not understand natural philosophy, is, that man having a well-tempered and disposed brain, suitable to each science, immediately, and without being directed by any teachers, speaks concerning that science of his own accord such elevated and subtle things, as are almost incredible. Vulgar philosophers seeing the admirable actions performed by brute-beasts, say, that there is nothing in them to surprize us, because they act those things by instinct of nature, which directs each species what it ought to do. They say well, in one sense, for

as we have proved already, nature is nothing else but the temperament of the four first qualities, and that the same is the master, instructing our souls how to perform their offices. But these philosophers call *instinct of nature* a certain heap of things they know not what, which they have never been able in the least to explain, or make intelligible. Those excellent philosophers, *Hippocrates*, *Plato*, and *Aristotle*, have referred all these admirable operations to heat, cold, moisture, and driness, which they take for the first principles without going farther. And being asked, who has taught the brute beasts to perform such surprizing actions, and men to reason? *Hippocrates* replied, *Nature, without any other teacher or master*; as if he would have said, the faculties, or the temperament of which these faculties consist, are all-knowing of themselves, without the direction of any master. This we shall easily apprehend, if we reflect on the operations of the vegetative soul, and of all the others which govern man; for from a drop of human seed, well-tempered, well-digested, and well-proportioned, is framed a body so regularly composed, so exact, and so beautiful, as the best sculptors in the world can but imitate at a distance. *Galen* amaz'd at the sight of so admirable a structure, the number of its parts, the situation, the figure, and use of each part, cried out, It was impossible for a vegetative soul and temperament to know how to make so admirable a work: and that God alone was the author of it, or, at least, some other very wise intelligence. But we have already utterly disallowed this way of talking, for it is unbecoming natural philosophers to impute the effects immediately to God, and overlook second causes; more especially in this case, where we see by experience, that if the seed of man be of an incongruous substance, not having the proper temperament, the vegetative soul produces a thousand extravagances: for if it be colder and moister than it ought, *Hippocrates* has told us, men would become eunuchs or hermaphrodites into the world; and if it were too hot and dry, *Aristotle* has noted, they would prove hare-lip'd, splay-footed, and flat-nosed, as the *Ethiopians* generally are, and would

dwindle

dwindle to a dwarfish stature; and if too moist, says *Galen*, they are like to prove unlick'd and unshapen lubbers: all which enormous defects, are great deformities in mankind, for which there is little reason to magnify nature, or to esteem her wise; but had God been the author of these works, each of these fore-mentioned qualities could not have failed of perfection. *Plato* says, only the first men were made by God's own hand; and all the rest since have been born by the ordinary course of second causes, which, if they are found in order, the vegetative soul performs her part very well; but if she concurs not as she ought, a thousand absurdities are produced. The good order for this effect is, that the vegetative soul have a right temperament: otherwise let *Galen* and all the philosophers in the world give a reason, why the vegetative soul should have more skill and ability in the first age of man's life, to shape the body, to nourish and make it thrive; than when old age approaches, when she is disabled? For instance, if an old man have a tooth drop out, there is no means or expedient to get another to grow in the same place; whereas, if a child lose all his, we see nature repairs the loss, by helping him to new ones. How then is it possible, that a soul that has no other business throughout the whole course of life, but to attract aliments, to retain and digest them, and expel the excrements, and duly repair the lost parts, at the end of our life should either forget or not be able to do the same? Certainly *Galen* would reply, that the vegetative soul is skilful and able in infancy, because of the great degrees of natural heat and moisture; and that in old age, she wants either ability or skill to do the like, because of the extremum cold and driness of the body incident to age.

In like manner, the skill of the sensitive soul depends much on the temperament of the brain, for if it be such as its operations require, it fails not to perform them aright; otherwise, she commits a thousand errors, as well as the vegetative soul. *Galen's* test to discover in one view the skill and efforts of the sensitive soul, was this, he took a kid newly kidded, which being on his legs began to go, as if he had been informed and taught that

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that his feet were given for that very end; and after a little space, finding before him several platters full of wine, water, vinegar, oil, and milk, upon smelling to each of them, he lapped only the milk; which being observed by many philosophers present, they began to cry out, that *Hippocrates* had with good reason said, *That souls were directed what to do without the teaching of any master.* Which is the same with the wise man's saying, *Go to the ant, thou sluggard, consider her ways, and be wise, which having no guide, overseer, or ruler, provideth her meat in the summer, and gathereth her food in the harvest.*

GALEN, not contented with this single experiment, two months after brought the kid into the fields, almost starved to death, and smelling on several sorts of herbs, he fed only on that which was goats-meat. But if *Galen*, who ruminated on the efforts of this kid, had seen three or four of them together, he would have observed some run better than their fellows, shift better, and acquit themselves better in each point we have mentioned; and had he brought up two colts of the same mare, he might have observed the one to be more graceful in going, to have better heels, to be more manageable, and stop better than the other; and had he taken an airy of hawks to train, he might have discovered, that one would have delighted much in seizing his game, another to be rank-winged, and the third a haggard, and ill-mann'd. He would have found the same difference in setting-dogs, or harriers, tho' each were littered from the same sire or dam, the one needs only the noise of the chace, and rouse the other never so loudly, it would affect him no more than a shepherd's dog. All which can never be ascribed to the vain instincts of nature, dream'd of by some philosophers; for if they were asked, why one dog has a better instinct than another, both being of the same kind and breed? I know not what they could answer, without having recourse to their common shift, namely, that God had given one a better natural instinct than another. And if they were further ask'd, why this hopeful hound, when young, hunted well, but become old, was not so good for the sport?

sport? and on the other hand, why the other, when young, could not hunt, but being old, was expert and fit to fly at all game? I know not what they could say. For my particular, I should say, that the dog that hunted better than the other, had more sagacity; and as for him that hunted well when young, and turned cur when old, that so it fared, because sometimes he had the qualities fit for the chace, which at other times he wanted. Whence we may collect, that since the temperament of the four first qualities is the reason why one brute beast acquits himself better than another of the same kind, the temperament is no less the master which directs the sensitive soul what it ought to do.

HAD *Galen* but reflected on the steps and motions of the ant, and observed her providence, her mercy, justice, and good government, he would have been at a loss, as we are, to see so small an animal endued with so great sense, without the teaching of any master whatsoever. But when we come to consider more closely the temperament of the ant's brain, and observe how proper it is for prudence, as we shall hereafter make appear, then will all our admiration cease, and we shall understand, that brute beasts arrive at the ability we discover in them from the temperament of their brain, and the images that enter there, thro' the senses. And whereas it is owing to this good temperament of the brain, that amongst animals of the same kind, one is more docile and ingenious than another; so if by any accident or distemper that should chance to be alter'd and impair'd, he would forthwith lose his ability, as man does under the like circumstances. A falconer affirmed to me upon oath, that he had an excellent hawk for sport, which became good for nothing, yet by applying a cautery he recovered him.

BUT here arises a difficulty, how the rational soul comes to be endued with this natural instinct, whereby she performs the acts proper to her species, of wisdom and prudence. It has been a controverted point betwixt *Plato* and *Aristotle*, which way man comes by knowledge: *Plato* says, That the rational soul is much older than the body, and enjoy'd in heaven before its union with

with the body, the company of God, from whom she descended, filled with wisdom and knowledge; but after her union, she lost this wisdom and knowledge, because of the ill temperament she met with; till in process of time this ill temperament was corrected, and in its place a better succeeded, by means of which, as being more fit for the sciences she had lost, she came by little and little to recollect what she had once forgot.

THIS opinion is false, and I admire so great a philosopher as *Plato* should be at a loss to give a reason for man's knowledge, seeing that brute beasts are endued with great sagacity, without deriving their souls from

Plato, taking from holy Writ, the best Sentences in his Works, thence got the Name of Divine.

heaven; he is therefore without all excuse, especially considering he might have read in the book of *Genesis*, (which he had in such esteem) that God made *Adam's* body before he formed his soul. It is much the same thing at this present, only with this difference, that nature now frames the body, and when that is once done, God infuses the soul into it, from which it never departs, no, not the space of a single moment.

ARISTOTLE took another course, affirming, *That all kind of doctrine and discipline was from knowledge antecedent to them*, as if he had said, all that men know, and all that they learn, comes from what they hear, or see, or smell, or taste, or touch; for the understanding can receive no notices, but what must pass thro' some one of the five senses. For which reason he said, *That the natural powers were in the nature of a blank paper*; which opinion is no less false than *Plato's*. To prove and illustrate which I must first agree with the philosophers, that there is but one soul in a human body, which is the rational, that is the principle of whatever we do or accomplish; (altho' there want not contrary opinions, asserting no less than two or three distinct souls besides the rational): this being so, as to the acts performed by the rational soul, so far as it is vegetative, we have already proved that it knows how to form a man, and to figure him as he ought to be; that we know how to draw nourishment,

to retain and digest the same, &c. and if there be defects in any parts of the body, it knows how to repair them anew, and to give them that structure which their use requires. And as to the acts of the sensitive and motive faculties, a new-born babe can apply and lay its lips close to press the milk, and this with so much art and address, as the wisest man in the world knows not how to do it so well. Besides, it pursues what tends most to the preservation of its nature, and flies what is noxious and offensive; he knows how to laugh and to cry, without staying to be taught by any. And if this be not so, who can the vulgar philosopher pretend has taught children to perform these actions, or through which of their senses have any notices arriv'd, that made them do it? I know well they may reply, that God has given them the same natural instinct as to brute beasts; in which they say not ill, if by natural instinct they mean no other thing than the temperament.

MAN as soon as he is born cannot exert acts proper to the rational soul; such as are to understand, imagine, and remember; because the temperaments of children are not well adapted to such acts, but rather appropriate to the vegetative and sensitive, as the temperament in old age is more proper for the rational soul, and less for the vegetative and sensitive soul; and if the brain, which by little and little acquires the temper that wisdom requires, might obtain it at once, man at the same instant would be able to reason and discourse better than if he had learnt the same at any time in the schools; but as nature cannot bestow it but successively and in time, so man by degrees gains knowledge. This is the main reason, as will appear clearly on consideration, that from the time a man arrives at the highest pitch of wisdom, by little and little he declines to ignorance, because as he approaches nearer to the last and decrepit age, he daily advances towards another temperament which is wholly different from the former. But to the end, we may by experience know, if the brain be temperate, so far as the natural sciences require, we need only attend to a thing, which happens every day; that if a man falls sick of any distemper that changes the

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temperament

temperament of his brain (as in melancholy and frenzy) he loses in a moment whatever wisdom, understanding, and knowledge he had, and utters a thousand extravagances; and on the contrary, I have frequently known very ignorant persons by this change of temperament, in the same distempers, inspired with more wit and ability than ever they had before.

To prove which, I cannot forbear telling you what happened to a courtesan in her sickness, who had during her health utterly lost her understanding, but as for her imagination, she conversed pleasantly, and made her compliments with a good grace; a certain contagious disease then rose, threw her into a malignant fever, in the midst of which, she shewed so much wit and judgment, as surpriz'd every one, and made her last will, the discreetest in the world, and died begging the mercy of God, and pardon for her sins. But what raised the greatest admiration was, that the same distemper seized on a very sensible and sober man, who had the cure of this sick person in charge, who died bereft both of wit and judgment, and neither did nor spoke the least sensible thing; and the reason of this was, that the temperament of the last, to which he owed his wit when he was well, was the self-same that the other took possession of by her distemper, instead of that she had in her health. Another instance of this, was a certain labourer, who being frantic, made a speech in my hearing, wherein he recommended his welfare to those about him, desiring them to take care of his wife and children, if it should please God to call him out of this world, with so many strains of rhetoric, and so great elegance, and purity of speech, that *Cicero* himself could scarce have made a better harangue in the open senate: at which, the standers-by, not a little surprized, asked me, whence appeared so great wit and eloquence in a man, who in his health could say never a wise word? I remember I answer'd, *That the fluent faculty of haranguing proceeded from a certain point or degree of heat, of which this labourer was possessed, by means of his distemper; for when the brain becomes hot in the first degree, it makes the man fluent, suggesting to his wit*

many

many things to say; but the reserv'd have all a cold brain, as the great talkers a hot one. This man's frenzy was caused by abundance of choler imbib'd in the substance of the brain, for that is the proper humour for poetry, which occasion'd *Horace* in his art of poetry to say, *That if the choler were not purged away in the spring, there would hardly ever be a better poet than himself.*

I CAN confirm the truth of this, from another lunatic, who for more than eight days, spoke never a word, and then immediately fell into a fit of rhiming, very often making no less than a good entire stanza; the by-standers being surprized to hear a man discourse all in verse, who in his health never knew how to make one. To all which we may add, That the famous *English* dramatic writer, *Nat. Lee*, so noted for his poetical enthusiasm, had his imagination heated by his frenzy in so great a degree, that some of the loftiest and sublimest flights that ever were conceived by man, were pronounc'd by him *extemporare*, in the mad-house where he was confin'd; many of which, from time to time, were taken down by several friends, who used to go for that purpose to see him. But this being an instance of a native genius, improv'd and heighten'd into a stronger enthusiasm by the force of his distemper, is not to be mentioned, if compar'd with those instances where the frenzy has so entirely alter'd the faculties of the mind, that it has inspir'd a soul with abilities that it never had before, as in the preceding instances; and what may be farther illustrated, in the page of a certain nobleman, who in health was reckon'd a youth of very indifferent genius, yet when, by the severity of a fit of sickness, he grew delirious, he made such agreeable discourses, and gave such pertinent answers to what was asked him, forming withal so fair an idea of the government of a kingdom (of which he conceited himself king) that all who came to see and hear him, were surpriz'd; nay, his lord, who for the novelty of the thing never stirred from his bed-side, wish'd he might never be cur'd. And when the page was recover'd, and the physician took leave of his lord, not without hopes of receiving a handsome gratuity, he met with this return;

I assure you, doctor, I never was so vex'd at any accident that befel me, as I am now, to see my page cured; because it seems unreasonable to me, to change so wise a folly into such a stupid understanding as his is when he is well. Nor did he meet with more gratitude from his patient, who told him, 'Twas with regret that he found himself cur'd, because, while he was frantic, he had the pleasantest enjoyments in the world, conceiting himself a kind of grand signior, and that there was no king on earth but was his vassal: adding, that tho' it were imaginary, he took as much pleasure in it as if it had been really true; so that according to him, his condition was chang'd for the worse, he finding himself but a poor page, that must begin to serve him, whom, in his sickness, perhaps, he would hardly have deign'd to make his page.

'Tis of no great importance what the philosophers think of this, and by what means it is brought to pass; for I am able to assure them from very credible histories, that some ignorant fellows that were sick of the same disease, have talk'd *Latin*, without ever so much as knowing what they said, when they came to themselves. I could tell of a she-lunatic, who told all that came to see her, their virtues and vices; so that no body durst go near her, for fear of the truths she reveal'd. Methinks I already hear from those that slight natural philosophy, that it is a meer mockery, and a fable; or, if it be true, that the devil, as he is subtle and cunning, enter'd, by God's permission, into the body of this woman, and the other lunatics, we have already spoke of, making them utter those surprizing things. Yet ought they to be tender in saying thus, because the devil, not having the spirit of prophecy, cannot know future things. They hold it for a strong argument, to prove it false, that they do not understand how it can be done; as if difficult and sublime things were to be understood by every capacity. I shall not go about to convince those by reason, that have not any themselves, because it would prove labour in vain: but I shall chuse to speak to them from *Aristotle*, that the men who have such a proper disposition as their actions require, may know many things

things without having them transmitted by any particular sense, or having learn'd them from any teacher: Many also, says he, *because this heat is near the seat of wit, are inflamed or struck with the disease of lunacy, or fir'd with a furious impulse; whence came the sybils, and the manades, and such as were suppos'd to be inspired by a divine spirit; this happening not so much by sickness, as by a natural excess.* Marcus, a citizen of Syracuse, was a good poet for it, when he was out of his wits; and those in whom this excessive heat is more remiss and moderate, are compleatly melancholic, but much wiser. By these words Aristotle owns, that many men, by reason of the extream heat of their brain, know things to come, even as the sybils did; which proceeds not, as he says, so much from sickness, as from the inequality of natural heat. And for this very reason he proved it clearly in the instance of Marcus the Syracusan, who was a very excellent poet all the time he was beside himself, from an over-heated brain; but as this great heat came to be moderated, he lost the art of making verses, tho' he remain'd more prudent and wise. So that Aristotle not only allows the temperament of the brain for the principal cause of these strange effects, but also reproves them that affirm it to be by divine revelation, and not a natural thing.

HIPPOCRATES was the first that gave the name of divine to these wonderful effects. *If there be any thing divine, says he, in distempers, the prognostic of it must also be learn'd.* By which he advises the physicians, when they guess at diseases, they should thence frame a judgment in what state they are, and from that, predict the crisis of their distemper. But what surprizes me most in this case, is, that if I should ask Plato, how it comes, that of two children of the same father, one should know how to make verses without any master's teaching, and the other, after all his labours in the art of poetry, should not know how to compose any? he might answer perhaps, That he who is born a poet, is possess'd with a divinity that inspires him, and the other, not. It was therefore with reason Aristotle reprehended

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him, seeing he might have fairly imputed it to the temperament, as he did in another place.

ARISTOTLE affirming, that there have been children, who at their birth pronounc'd distinctly some words, and afterwards became mute, reproves the vulgar philosophers of his time, who being ignorant of the natural cause of that effect, attributed it to divinities. Tho' he could never discover the reason and cause of childrens speaking at their birth, and being afterwards mute; yet, notwithstanding, it never once enter'd into his thoughts that it was owing to any supernatural effect, as the vulgar philosophers vainly imagine, who finding themselves entangled with the sublime and subtile things of natural philosophy, possess them that know nothing, that God, or the devil, are the authors of such prodigious effects, as proceed only from natural causes. Children that are begot in old age, may begin to reason and discourse a few days and months after they are born, because the cold and dry temperament, as we shall prove hereafter, is more appropriate to the operations of the rational soul, and what time, and the long succession of days and months might effect, is supplied by the sudden temperament of the brain, that after this manner is push'd forward by many causes leading to that end. *Aristotle* tells us of other children, who began to speak as soon as they were born, and afterwards were mute, till they arriv'd at the age allotted for speaking; so that this effect was occasion'd by the same causes as affected the page we have mentioned.

As for the she-lunatic who divined, how that might be, I will make more intelligible from *Cicero*, than from the natural philosophers, who describing the nature of man, speaks after this manner: *That creature of foresight, sagacious, sharp-witted, capable of all things, of good memory, endued with reason and council, which we call man*: and more particularly he affirm'd, that some men, by nature, surpass others in the knowledge of future-ities: *for there is a power and kind of nature, says he, which penetrates into and predicts things to come, the force and nature of which, has never been yet explained by reason.* What led the natural philosophers into an

error, was their not considering, (as *Plato* did) that man was made after the likeness of God, and that he participates of the divine providence, being qualified to distinguish all the three differences of times, with memory for the past, sense for the present, imagination and understanding for the future: And as there are observed some men surpassing others in the remembrance of what is past, and some excelling others in the knowledge of the present, so are there some who are naturally more capable than others in guessing what is to come. One of the strongest arguments that enforc'd *Tully* to believe the rational soul incorruptible, was the observing with what certainty some sick people predicted futurities, especially when they were nearest death; from whence, he says, *That the melancholic falling sick, are endued with a kind of divination.* And *Hippocrates* observing this wonderful faculty of prediction in such persons, declares, *That when the distemper'd utter such divine things, 'tis a sign the rational soul is disengag'd from the body,* and therefore asserts, *that such never recover;* which, however, is, in some instances, contrary to experience.

AND I myself hold, that there are some indications subservient to us in the knowlege of the past, and of the present, and that help us to conjecture at the future; nay, and to guess at certain secrets of heaven. *For the things of God from the creation of the world are clearly seen, being understood by the things that are made,* *Rom. i.* He that shall have the requisite faculty may attain it; and the other shall be such a one as *Homer* speaks of; the ignorant understand the past, but not the future; but the prudent and discreet is the ape of God, imitating him in many things; and tho' he cannot do it to so great a perfection, yet nevertheless he can counterfeit it in some measure. However, 'tis to be observ'd, that, at the best, this spirit of prognostication is by no means attended with the same infallible certainty as the predictions of the prophets of old, who were immediately inspired by the Holy Ghost.



C H A P. VIII.

From these three qualities alone, HEAT, MOISTURE, and DRINESS, proceed all the differences of wit observ'd among men.

AS long as the rational soul is in the body, it is impossible it should perform different and contrary actions, if to each it have its proper and peculiar instruments. This is clearly seen in the animal faculty, which exercises divers actions in the exterior senses, each having its particular and proper organ; the sight has it after one manner, the hearing after another; the taste, the smell, and the touch each after another: and if this were not so, there would be but one sort of actions, all would consist either in the sight, in the hearing, in the taste, in the smell, or in the touch; because the organ determines the power to one action only. From what passes plainly through the exterior senses, we may collect what is acted in the interior. We understand, we imagine, and remember by the same animal virtue. But if it be true, that each action requires its particular instrument, there must necessarily be one organ in the brain to understand, another to imagine, and a third to remember; for if the whole brain were organiz'd after one and the same manner, all would be either memory, or understanding, or imagination; but when we see such different actions, of necessity there must also be divers instruments. And yet if one should dissect a head to anatomize the brain, all would seem compos'd after the same manner, of the like substance, without difference of parts or diversity of kinds. I say, that it seems

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so, because, as *Galen* has observ'd, nature has placed abundance of things in man's body, that are compound, which the senses nevertheless judge to be simple, because of the subtlety of the mixture: which may also happen in the brain of a man, tho' to sight it seems no such thing. Besides this, there are four small ventricles in the cavity of the brain, of which *Galen* taught the use: but, for my part, I hold, that the fourth ventricle, which is behind the head, has no other function than to digest and refine the vital spirits, and turn them into animal, enabling them to give sense and motion to all parts of the body, because we cannot find in human bodies two such contrary operations, that interfere with each other, so much as reasoning and the digestive faculty. The reason is, that speculation requires the repose, serenity, and clearness of the animal spirits; whereas the digestion is made with noise and ferment, and from that operation arise many vapours which infest and darken the animal spirits, in such manner as the rational soul cannot well distinguish the figures of things. Nor was nature so inconsiderate to join in one place two actions that are perform'd with so great a repugnance and contrariety. Be it how it will, *Plato* mightily commends the providence and care of him who made us; for having separated the liver at so great a distance from the brain, lest by the noise made by the boiling and concoction of the food, and by the obscurity and clouds cast on the animal spirits by the vapours, the rational soul should be discomposed in reasoning. However, if *Plato* had not remark'd this from philosophy, we see it every hour by experience, for notwithstanding the liver and the stomach are so very distant from the brain, yet none can sit to study, with the same edification, immediately upon eating, as some time after.

WHAT seems most true in this matter, is, that the office of the fourth ventricle, is to digest and alter the vital, and resolve them into animal spirits, for the end we have mention'd: and for this reason, nature has also separated the three other, and has lodg'd it like a little brain by it self apart, as is to be observed, lest by its

operation, the speculation of the other should be disturb'd. For as to the three little cells before, it is not to be doubted, but nature has made them to reason and discourse; as clearly appears in deep study and musing, which never fail to make that part of the head ake, which corresponds to these three cavities.

THE strength of this argument appears, if we consider, that even the other powers being fatigued in performing their office, always cause some pain to those organs with which they are exercised: as after gazing too long a time, the eyes water, and after walking too much, the soles of the feet will ake. Now the difficulty is to know in which of these cells dwells the understanding, in which the memory, and in which the imagination; because they are so close and near neighbours, that one cannot well distinguish, or know it by the experience we even now spoke of, nor by any other token. Moreover, if we consider, that the understanding can do nothing without the memory be present to it, to offer and represent to it the figures and species, (according to the saying of *Aristotle*, *He that understands has no more to do than reflect on the images*); nor the memory again, without being seconded by the imagination, as we have elsewhere noted; we may easily conclude, that all the three faculties are joined and united together in each ventricle; that the understanding is not by it self in one, nor the memory by it self in the other, nor the imagination by it self in the third, as the vulgar philosophers have thought. This union of powers and virtues uses to be made in human bodies, when one cannot act without the concurrence of the other, as appears in the four natural virtues. The attractive, the retentive, digestive, and expulsive; which, to be of use one to the other, have, by nature, been assembled in one and the same place, and not separated from each other.

BUT if all this be true, to what end has nature prepared those three ventricles, and to each of them join'd all the three rational powers, since any one of the three was sufficient for the understanding and the memory to play their parts? To this may be answer'd, That it is
equally

equally difficult to know why nature has made two eyes, and as many ears, since in each of them the whole power of seeing and hearing resides, and one may see with one eye alone. To this it may be said, that how much greater the number of organs of the powers appointed and established for the perfection of the animal is, so much more assured is the perfection and possession of them; because by some accident one or two may fail, and then it is convenient, that there should be a supply from others of the same kind, which may be ready to act.

IN the disease call'd the *Resolution, or Relaxation, of the sinews, or palsy of half the body*, the operation of the ventricle that answers to the sick-side, is usually lost, in such manner as if the two others remain'd not entire and unhurt, the man would be stupid and devoid of reason. And nevertheless, from the want of this ventricle alone, he is observ'd to be very weak, as well in the actions of the understanding, as of the imagination and memory: even as he who uses to see with two eyes, would be at a loss in his sight, if one of them was quite out. By which means it may be clearly understood, that in each ventricle, all the three faculties are found, since from the hurt of one only, all the other three are weakened.

SUPPOSE now, that all the three ventricles are compos'd after the same manner; and that there is no diversity of parts to be found in them, we cannot be at a loss if we take the first qualities for the instrument, and so make as many differences of wit as there are of the first qualities. For it is against all natural philosophy to believe, that the rational soul being in the body can exercise her operations without the mediation of a corporeal instrument to assist her. But of the four qualities that appear, the heat, cold, moisture, and driness, all physicians reject the cold as of no use at all, in the operations of the rational soul: and accordingly it is observ'd by experience, in all the other powers of man, that where the cold over-ballances the heat, they are blunted and retarded in their offices; insomuch, as neither the stomach digests the meat, nor the muscles duly

move the body, nor the brain duly reasons and discourses. For which reason *Galen* said, *The cold manifestly incommodates and retards all the operations of the soul*; serving only in the body to allay the natural heat, and to hinder it from being inflam'd. But *Aristotle* is of a contrary opinion, where he says, *The thick and hot blood renders the man strong and robust, and the thinner and more cold of a more delicate sense and understanding*: whence it clearly appears, that from cold proceeds the greatest difference of wit in man, viz. the understanding. *Aristotle* therefore enquiring, why the men inhabiting hotter countries (as *Egypt*) are more subtle and ingenious than those who live in colder climates, makes answer, That the ambient heat being excessive, draws forth and consumes the natural heat of the brain, leaving it cold, which makes men more sharp: and that, on the contrary, the great ambient cold concentrates the natural heat of the brain, not suffering it to disperse: and farther, they who have very hot brains, says he, can neither reason nor discourse, but are volatile, never fixing in one opinion. *Galen*, as it seems, alluded to this, where he says, the reason why some change their opinions every moment, is, because they have very hot brains; and, on the contrary, they that have cold brains will be firm and steady in their opinions.

BUT the truth is, there is no difference of wit proceeds from this quality, neither could *Aristotle* mean, that the blood, cold in excess, made the understanding better, but only when it is less hot. When a man is fickle, it is true, it proceeds from too great a heat, that raises transient figures in his brain, making them ferment or boil as it were; by which means the images of many things represent themselves at once to the rational soul, awakening and inviting it to a consideration of them; by which means, very often, while she endeavours to enjoy all, she makes herself not effectually mistress of any, and is ever fluctuating and varying her purposes, as new ideas present themselves, before any one of 'em can be brought to perfection.

THE quite contrary happens in cold, which renders a man fix'd and stable in opinion; because it keeps the ideas fast lock'd up, not permitting them to vary so fast, and so represents no other image to a man but what is called for. Cold has this peculiar, that it retards the motions, not only of corporeal things, but also renders the intellectual figures and species immovable in the brain; but this firmness seems rather to be a certain dullness, than a difference of wit. There is another kind of steadiness, which proceeds from the understanding being closer and more compact, and not from any coldness of brain.

DRINESS then, moisture and heat, remain as instruments of the rational faculty: but not one philosopher knew how, particularly, to assign to each difference of wit, the quality that serv'd it for an instrument. *Heraclitus* said, *That the sharpness of wit was from a dry light*. By which words he gives us to understand, that driness is the cause of the great prudence and wisdom in man; but he has not shewn, in what kind of knowledge a man was excellent by means of this quality. *Plato* intended no less, when he affirm'd, That the soul upon its entering the body, was very wise, but that the great moisture it met there, render'd it lumpish and dull, till as that moisture wears off in age, and the body becomes drier, the soul discovers that knowledge and wisdom it had at first. Among brute beasts (*says Aristotle*) those are more deliberate whose constitution is more cold and dry, as the ants and bees, who may dispute for wisdom with men that are reasonable creatures. Besides, there is not a brute beast more moist than a hog, and which has less wit: for which cause, the poet *Pindar* being to tax the *Bæotians* for blockheads, express'd himself in this manner:

Dicta fuit sus gens Bæotia vecors.

Stupid *Bæotians* wore the name
Of swine, their nature was the same.

And

And *Homer* informing us that *Ulysses* was always wise, feigns that he was never turn'd into a hog. *Galen* affirm'd also, That the blood by reason of its too great moisture, made men silly: and recounts, that the comic poets accused *Hippocrates's* children of it; alledging they had too much natural heat, which is a moist substance, and abounding with vapours. The children of wise men are not without this defect; of which I may hereafter assign the reason. Of the four humours we have, there is not one of them found hot and dry, but melancholy. And *Aristotle* affirms, That all the men that ever signaliz'd themselves in the sciences, were melancholic.

IN fine, all agree, that driness makes a man very wise; but no man shews which of the rational faculties it most favours. The prophet *Isaiah* (*ch. xxviii.*) only determined it, when he said, *Vexation gives understanding*, because sorrow and affliction, not only lick up that moisture of the brain, but have also power to dry up the very bones, by which quality the understanding is made more sharp and acute; according to the *English* proverb, *Necessity is the mother of invention*; which is chiefly demonstrated in many men reduc'd to poverty and misery, who have happen'd to speak and write things worthy of admiration; but being afterwards rais'd by fortune according to their wish, have done nothing more of importance; whence also comes that other observation, that to make a *bishop*, is to spoil a good preacher. For, a delicate life, content, a stream of fortune, and all things succeeding smoothly to our wish, much relax and moisten the brain; and, as *Hippocrates* said, enlarge and dilate the heart, giving it a sweet and gross heat: which is again easily prov'd; for if affliction and grief dry up and consume the flesh, by which means a man acquires a better understanding, it is certain, that the contrary, which is chearfulness, fails not to moisten the brain, and impair the understanding. They who attain the last sort of wit, are more dispos'd to sports, feasts, music, frequenting merry company, and avoiding the contrary, which at other times were wont to give them relish and content. Hence the observation of the preacher, *Ecclef. vii. 4.* *The heart of the wise is in the house of sadness* (of

(of which the property is to dry); *but the heart of the fool is in the house of mirth* (of which the property is to moisten).

HENCE may the vulgar learn how it comes, that a wise and virtuous man, raised to great honour (who before was poor and humble) sometimes immediately changes his manners, and his way of reasoning; for this proceeds from his acquiring a new temperament, moist and full of vapours, by which means he effaces the figures he had before in his memory, rendering his understanding dull and sluggish.

'TIS very difficult to know what difference of wit proceeds from moisture, because it so strongly contradicts the rational faculty. At least, according to *Galen's* opinion, all the humours of our body that are moist in excess, render the man stupid and ignorant, which occasion'd him to say, *The prudence and activity of the rational soul, arise from choler; integrity and constancy, proceed from the melancholic humour; simplicity and stupidity, from blood; phlegm, or water, serving for nothing but to feed sleep.* Inasmuch, that the phlegm and the blood (so far as it is moist) no less conspire to ruin and destroy the rational faculties; but this is to be understood of the discursive and active faculties, and not of the passive, as the memory is, which depends on moisture, even as the understanding does on driness.

Now we call the memory a rational faculty, because without it the understanding and imagination are of no use. It affords them matter, and furnishes them with figures to reason, according to that of *Aristotle* before quoted, *He that understands does no more than reflect on the images.* And the proper office of the memory is to lay up those figures for the understanding when it would reflect on them; and therefore if that be lost, it is impossible for the other faculties to perform their function. *Galen* says, the office of the memory is no other than to keep the figures of things, without having any invention of its own: *The memory, says he, treasures and lays up the things which are transmitted from the sense and understanding, as in a coffer, or repository, having no invention of its own.* This being its office,

one may clearly perceive it depends much upon moisture, which softens and prepares the brain, for the figures that are imprinted by way of compression. Childhood is an evident proof of this doctrine; seeing, in that age, the memory is readier than in all the other, because the brain then is moistest. *Aristotle* therefore demands, *Why the old have more wit and a better understanding, and the young learn with greater facility?* To which he makes answer, That the memory of old people is filled with so many images of things which they have seen and heard during the long course of their life, that there is no room left to receive any thing new; but that of children meets with no difficulty therein, which makes them receive and retain immediately all that is told and taught them. And this he farther illustrates, by comparing the morning and evening memory, and shewing, that we learn better in the morning, because we then rise with a fresh memory, than in the evening, because it is then stuffed with all the objects of the day past. But this great philosopher did not sufficiently attend to the point in hand; and it ought not to be wonder'd at, if we find persons of less wit and sagacity than *Aristotle*, form better arguments than his, in some particular cases which they have made their study: and *Plato* does very well, when he advises such as read his works, to consider them with great care, and not to rely too much on the good opinion they have conceiv'd of them; *Because it would be a great shame,* says he, *that nature having given me eyes to see, and an understanding to distinguish, yet I should ask Aristotle, and the other philosophers, what are the figures and colours of things, and what being and nature they have. Open your eyes then,* adds he, *make use of your wit and ability, and fear nothing; for the same God that made Aristotle made you also; and he who formed so great a wit, is equally able to form a greater.* I instance not this to lessen the veneration which we ought to have for excellent authors, but to stimulate every one to make improvements by the strength of his own genius and observation, and not to depend, implicitly, on the studies of others; for if the great *Aristotle*, of whom we are speaking, and
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other mighty genius's, had taken things upon trust, we should have wanted the many wonderful lights and discoveries which we owe to their indefatigable studies. By the improvements made since their time we may hope for still greater; and to make a slavish dependance on the opinions of our predecessors, can only serve to increase our faith, and not improve our knowledge.

SINCE then the answer *Aristotle* gave to the problem satisfies me not, I am oblig'd to give a reason, why my understanding will not admit it; and the reason is very clear, for if the species and figures which are in the memory had matter and quantity to possess place, his answer would have been good; but being indivisible and immaterial as they are, they can neither fill nor vacate the place where they are. Nay, we see by experience, the more the memory is exercised in receiving every day new figures, the more capable she is to receive them. According to my doctrine, the answer to the problem is very easy; for I should chuse to say, that old men have a good understanding, because they are very dry; and that they have no memory, because they have no moisture: by which means the substance of their brain is harden'd, so that they cannot receive the impression of figures, neither more nor less, than hard wax receives with difficulty the figure of the seal, while the soft receives it with great facility. Among young people the contrary happens, who from abundance of moisture of the brain, want understanding, and have a good memory, because of the softness of the same brain, in which, by reason of the moisture, the figures and species from without, make a good, firm, easy, and deep impression.

THAT the memory is better and readier in the morning than evening, is not to be denied, but not for the reason *Aristotle* gave just now. The night-sleep is the cause of it, that moistens and strengthens the brain, which by the waking of the whole day dries up and hardens. Therefore *Hippocrates* said, *They that desire to drink in the night, being very dry, if they sleep upon it, it is good*; and the drought goes off, because sleep moistens the body, and fortifies the ruling faculties of man. But that sleep produces some effect, it follows clearly from this

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this doctrine; *Aristotle* himself confesses, That the understanding and the memory are opposite and contrary faculties; so that he who hath a great memory, may want understanding; and on the other hand, he who has a better understanding, may not have a good memory; because it is impossible for the brain to be moist and dry at the same time, in an intense degree. *Aristotle* built upon this maxim, to prove that the memory is a different faculty from remembrance, and forms his argument after this manner. Such as have a great remembrance are men of great understanding, and those who have a good memory, want understanding; the memory and remembrance then are two contrary powers. According to my doctrine, the first proposition is false, because they who have a great remembrance want understanding, but are masters of a large invention, as I shall presently prove. But the second proposition is true, tho' *Aristotle* did not know the reason upon which he grounded the contrariety between the understanding and the memory.

THE *imagination* arises from heat (which is the third quality) because as there remains in the brain no other rational faculty, so have we no other quality to ascribe to it. For the sciences appertaining to the imagination, are the exercise of them that rave in their sickness, and not the same with those which belong to the understanding and memory. And suppose that phrensy, madness, and melancholy, are the over-heated passions of the brain, we may thence draw a strong proof, that the imagination consists in heat. There is but one thing in which I find some difficulty, which is, that the imagination is contrary to the understanding, and to the memory also; and the reason is not clear'd by experience, because great heat and driness may well enough meet in the brain in an intense degree, and so may great heat and moisture; insomuch, that a man may have a good understanding with a great invention, and a happy memory with a vast invention; and yet nevertheless it is a wonder to find one of a great invention, who has neither a good understanding nor a good memory. The reason of which is, that the understanding requires that the brain

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be compos'd of very subtle and delicate parts, as we have elsewhere prov'd from *Galen*, and that a great heat dissolves and consumes the more delicate parts, leaving behind those that are more gross and earthy. And for the same reason, a good invention cannot be coupled with a great memory, because the excessive heat dissolves the moisture of the brain, leaving it hard and dry; by which means it cannot so easily receive the figures.

So that, upon the whole, there remain no more than three principal differences of wit to be found in man, because there appear but three primary qualities, whence they can proceed. But under these three general differences are contain'd many other particular ones, by reason of the several degrees, that heat, moisture, and driness may produce: yet is it not precisely true, that from every degree of these three qualities results a different wit; because the driness, heat, and moisture, may exceed to such a degree as the whole rational faculty may be reversed; according to that aphorism of *Galen*, *Every excess of temperament dissolves the powers*: a thing most certain; for altho' the understanding be advantaged by driness, yet nevertheless that driness may be in such excess, as to incommode its operations: which, neither *Galen* nor the ancient philosophers allow of; for they, on the contrary, assure us, That if old mens brains were not over cold, they would not decay, tho' they were dry even in the fourth degree. But they are mistaken in this, as appears by what we shall prove from the imagination, for tho' its operations are performed by means of heat, as soon as it is past the third degree, that faculty forthwith begins to decay; and the same equally happens to the memory from too great a moisture.

Now I cannot say in particular how many differences of wit arise by reason of the intense degrees of each of these three qualities; but I must first deduce, and recount all the operations of the understanding, imagination, and memory. You are to know then, that there are three principal actions of the understanding: the first is, to discourse; the second, to distinguish; and the third, to chuse. And these constitute the three differences of the understanding. The memory is likewise divided into
three

three other ; into that which readily receives, and as soon loses ; that which difficultly receives, but long retains ; and that which easily receives, and is long a losing

THE imagination comprehends many more differences ; for it has three of them, as well as the understanding and the memory, and from each degree arises three others. We will hereafter speak more distinctly of them, where we shall assign to each the science that answers it in particular.

BUT he that would consider the three other differences of wit, shall find, that there is one sort of abilities that naturally disposes persons to the clear and easy parts of what they learn ; but when they proceed to the subtle and obscure, it is equally in vain for the master to break his brains to teach them to conceive those points by proper examples, as that they themselves should strive to form an idea of them in their imaginations ; for they have no capacity for them. In this rank are all the half-witted in all sciences whatever, who being examined in the obvious points of their art, answer all they understand with perspicuity and ease ; but being put to the very delicate and subtle part, utter a thousand absurdities.

A SECOND sort of them are which rise a step higher ; for they are docile, and readily receive the impression of all the rules and considerations of the art, whether clear or obscure, easy or difficult ; but the doctrine, the arguments, the answers, the doubts, and the distinctions, all these cost them a great deal of trouble and pains ; these have need to learn the science from able masters, who know a great deal, to have abundance of books, and be assiduous in study ; because whatever they know or learn, they must take it from another, and beyond that, have no invention of their own.

BUT then there are a third sort of wits, that nature makes so perfect, that they are hardly in any want of a master to direct them to reason ; for from any remark the master shall slightly have dropt, they raise strait a thousand considerations of their own, which never having been taught them, appears like inspiration to every

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one, that with surprize finds their mouths fill'd with so much knowlege. Of all others, these inventive genius's are the fittest to write books; for 'tis requisite, that to the end the sciences may receive daily improvement, and advance nearer to perfection, that the inventions of these fertile wits should be communicated to the world; and indeed the performances of all others, especially of the two other classes of wit, should be greatly discourag'd by the public, and only those of this species encourag'd; for all that the former can give us, are but collections and bare repetitions of what is to be found in authors before: and while they play the plagiaries, stealing from one and another, there is none of them composes a work of his own. The inventive wits are term'd, in the *Tuscan* tongue, *Capricious*, for the resemblance they bear to a goat, who takes no pleasure in the open and easy plains, but loves to caper along the hill-tops, and upon the points of precipices, not caring for the beaten road, or the company of the common herd. While the cramp'd and fetter'd sort of those we have mention'd, never go beyond one speculation, as if they imagined there was nothing more in the world to know. These have a sheep-like quality, who never quit the ram's walk, but content themselves to tread the common path, and even go not forward there, except some bell-weather of the herd go before them, and point out the dull, easy way.

THESE inventive and fertile species of wits, are of great advantage to the master of a school, to be plac'd at the head of the other two; for, as in a great flock of sheep, the shepherds are us'd to stimulate or prick forward a select number of goats to the search of fresh pastures: even so it is no less requisite in human learning, there should be some of these *capricious* wits to discover to slow and sheep-like understandings, new secrets of nature, and raise them to exercise themselves in speculations they would otherwise have no notion of; whereby all the useful arts are improv'd, and men yet unborn shall be edify'd by the labours of those who went before them.



C H A P. IX.

Some doubts and arguments against the doctrine of the last chapter, answer'd.

ONE of the reasons why the wisdom of Socrates has been so celebrated even to this day, was, That after he had been pronounc'd by the oracle of *Apollo* the wisest man in the world, he spoke thus: *This only I know, that I know nothing*; intimating thereby, the little certainty there is in human sciences; since, it is found by experience, that all is full of doubts and disputes; to which purpose is that saying, *The thoughts of men are full of doubts, and all their foresight uncertain.*

GALEN made the like reflection, when he said, *That the knowlege of the nature of occult things was not to be found among the philosophers, and yet much less in the art of physick; and to say all in a word, says he, it is unknown to men.* By which he would seem to intimate, That philosophy and physick are, of all sciences, the most uncertain: And if this be true, what shall we say to the philosophy here handled, in which we have pretended to make an anatomy of the powers and faculties of the rational soul, than which nothing can be more obscure, or clogg'd with greater doubts and difficulties? some of which, as they occur to me, I shall state and obviate: And,

First, It may be objected, That the drineness of the brain, to which we have imputed the causes of the acts of the understanding, supposes that this faculty stands in need of corporeal organs to exert it self; which is contrary to the opinion of *Aristotle*, who proves, by reasons not to be easily answer'd, That the understanding is not an organic faculty; because to this faculty belongs to know

know and understand the nature and being of all the material things in the world; insomuch, that if it were united with any corporeal thing, that very union would hinder the knowledge of all others; as we see in the exterior senses, that if the taste be bitter, whatever the tongue touches has the same savour; and if the crystalline humour be green or yellow, the eye judges whatever it sees to be of the same colour; and the cause of it is, that *inward tinctures bar the entrance of objects from without*. Aristotle said also, That if the understanding were united to any corporeal instrument, it would be susceptible of a material quality, because that which is united to it, be it hot or cold, must necessarily have communication with heat or cold. But to say the understanding is hot, cold, moist, or dry, is a proposition abominable to the ears of any natural philosopher.

BUT to this we answer, That it must be consider'd there are two sorts of understanding in man, one of which is the power in the rational soul, and that is as incorruptible as the rational soul it self, without depending in the least upon the body or its material organs, either for its being or preservation; and Aristotle's arguments have only place, with regard to this power. The other sort of understanding is all that which appears necessary in the brain of man, to the end he may understand as he ought: 'Tis in this sense we use to say Peter has a better understanding than John, which cannot be taken for the power lodged in the soul, because it is of equal perfection in all, but rather for some of the organic powers, which the understanding makes use of in its acts; some of which it performs well, and others ill; not at all through its own fault, but because the powers it makes use of in some, find good organs, and the contrary in others. Which is to be understood in no other manner, since we find by experience, not only that some men reason better than others, but even that the same person reasons and discourses well at one age, and ill at another, as we have already prov'd. Nay, there are some who lose their judgment, even as others recover it, from certain distempers of the brain: which is particularly seen in the hectic fever; for when that

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once reaches the brain, the sick person begins to speak and reason more judiciously than he used, and how much the deeper that evil gets root, so much the more excellent are the operations of the understanding; which was not consider'd by some of the ancient physicians, tho' this knowledge be of great importance in the first appearance of the disease, when the cure is easy.

BUT what these organic powers are, of which the understanding makes use in its operations, has not yet been resolv'd or determin'd, seeing the natural philosophers say, that if one man reasons better than another, it comes from the understanding's being an organic power, and better dispos'd in one than another, and not for any other reason: for rational souls and their capacities (when separated from their bodies) are of equal perfection and knowledge. And *Aristotle* himself gives weight to this argument, when he proves that the understanding is better, as the memory is worse; and on the other hand, that the more the memory advances and rises to a point, the more the understanding fails and declines; and therefore *Aristotle* demands, Why the old have so bad a memory, and so good an understanding; and the young a good memory, with a bad understanding? Experience also furnishes us with instances, that when the temperament and good disposition of the brain are destroy'd by sickness, we often lose the use of the operations of the understanding, while those of the memory and imagination remain unimpair'd; which could never be, if the understanding had not a particular instrument by its self, distinct from that of the other powers. What I shall answer to this, is, That when the brain is observ'd to be moister than it should, the easiness to receive and retain in the memory improves; but when the representation of the species is not so vivid, nor so good, it is, without comparison, better effected with driness, which is light and clear, than with moisture, which is dark and troubled; insomuch, that the understanding fails in its operations, from the clouds and obscurity of the species. Quite contrary, those who are of a dry brain, have not a memory that receives and retains well; but in recompence, are provided with an imagination

nation which helps them to see clearly the figures, because of the light which attends the driness, and it is that of which the understanding has most need, according to *Heracitus's* saying, *The dry light makes the soul wise*. What darkness, and what mists, moisture spreads over the objects, and what light, driness brings along with it, may be easily observed in the night, when the south and north winds blow: the first darkens and overcasts the stars, and the other renders them bright and clear. The same things fall out with regard to the figures and species in the memory, inasmuch that it is not to be admired, that the understanding sometimes blunders, and sometimes hits right, according as these species and figures which it makes use of in speculation, prove either clear or obscure, without any necessity of its being therefore a faculty tied to its organs, or of any defect to be imputed to it.

SOME natural philosophers have pretended, that the incorruptibility of the heavens, their clearness and transparency, as well as the sparkling of the stars, was owing to the great driness of their composition. 'Tis for the same cause old men reason so well, and sleep so ill; because, say I, of the great driness of their brain, which is in a manner clear and transparent, and the species and figures as sparkling as the stars. And as driness hardens the substance of the brain, from thence comes it, that they learn so ill by heart: on the contrary, children have a good memory, sleep well, and reason ill, because of the great moisture of the brain, which renders it soft, dark, full of vapours, clouds, obscurities, and the species troubled and unclear, which presenting in that condition to the understanding, make it commit errors, through the defects of the object, rather than its own. In this consists the difficulty found by *Aristotle*, in joining a good understanding with a great memory, and not from the memory's being contrary to the understanding. For if we consider well, we shall find, there is no faculty subservient to so many operations of the understanding, as the memory; for so long as that has not something that keeps it

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employ'd, in representing the figures and species, the man remains imperfect and stupid. 'Tis even as *Galen* reports, that in a certain plague that happen'd in *Asia*, the men lost their memory to that degree, that they forgot even their own names; many forgot also what they had learn'd in the arts and sciences, insomuch, that they were obliged to study them again, as if they had never learn'd them at all. Others also forgot their language, being unable either to speak, or reason, for want of memory. It was upon this occasion, said *Plato*, that the antients rais'd temples and altars to *Memory*, adoring her as the goddess of the sciences; for thus he speaks: *But besides the Gods thou hast brought me, there must be others also invoc'd, and especially Memory, which gives the chief weight and ornament to our discourse, to the end that we may publicly acquit ourselves well of our charge.* In which he had great reason; for a man knows not in how many things the same faculty has in store for him, it being no less than the treasury of the sciences. Now, as we shall elsewhere prove, when the brain is well temper'd, and no quality exceeds the others, a man has at the same time a good understanding with a great memory; which could not fall out, if these two faculties were exact contraries.

2dly. 'Tis objected, That *Aristotle*, and all the peripatetics, have added to the three powers, which we have asserted to be the original of human wit (*viz.* the *Understanding*, the *Imagination*, and the *Memory*) two others, to wit, *Remembrance* and *Common Sense*, in pursuance of this rule, *The faculties are discern'd by their acts*: and that therefore the wit of man arises from five faculties instead of three.

IN answer to which, 'tis to be observed, that all difference of actions does not shew a diversity of powers; for, as we shall prove hereafter, the imagination performs such strange actions, that if this maxim were true, there would be more than ten or twelve several powers in the brain: but because all these actions agree in one kind, they denote but one imagination, which afterward is divided into several particular differences, because

because of the diversity of actions it performs. To compose the species in the presence or absence of the objects, not only does not conclude that there are some different generical powers, as are the common sense and the imagination; but also that the same are no particular faculties.

3dly. It may be objected to us, that whereas in the preceding chapter, we have compared the office of memory, in the words of *Galen*, to a coffer or repository, which is of no other use than to treasure up the things that are repositied there; in this case, there will be still need of another faculty to draw out the figures from the memory, and represent them to the understanding, even as 'tis necessary for a hand to open the coffer, to take out what was laid up in it.

To which I answer, That the memory may be considered under two heads; the one, as a faculty that has its subject in the rational soul; and the other, as it regards a corporeal organ, which nature has framed for it in the brain. For the first, it belongs not to the jurisdiction of natural philosophy, but to the metaphysician, from whom we ought to learn what it is. For the second, it is a thing so difficult to conceive, after what manner one man is furnished with a great memory, and another has none at all, and what instruments nature has made in our head, to make us recollect what is past, that natural philosophy is driven to invent and search out for similitudes to make it understood. *Plato*, for example, compares the imagination to a writer, and the memory to blank paper, and declares, That as the writer sets down in paper those things he would not forget, and revises them after he has put them in writing; in the same manner it must be understood, that the imagination imprints in the memory the figures of things, which the senses and the understanding have been acquainted with, as well as those others which she herself invents; and when it would recollect them, *Aristotle* has said, it returns to review and revolve. *Plato* made use of this comparison, when he declared, That in apprehension of the failing of his memory in his old age,

he was diligent in substituting another of paper (which was his books) that he might not lose his labour, but upon each review, it might anew be represented to him; the imagination does no more, as often as it imprints in the memory, and reads it over again, whenever it is to recollect itself. *Aristotle* was the first that broach'd this opinion, and *Galen* the next, who spoke after this manner. *For the part of the soul that imagines, which ever it is, it seems to be the very same that remembers.* And this appears plainly, in that the things which we imagine with much intention of mind, sink deeper into the memory, and those of which we think but slightly, are soon forgot. And as the writer, when he has writ a fair letter, reads it easily, and without mistake; even so it fares with the imagination; for if it stamp them with force, the figures remain well imprinted and mark'd in the brain, otherwise they are hard to be distinguished. The same also befalls old writings, of which, part remains sound and fresh, and part is worn out by time, and cannot well be read, unless the defects are supplied by guesses: the imagination precisely takes the same course, when some figures are effaced in the memory, and others retain'd. Whence sprang *Aristotle's* error, who, for no other reason, believ'd that remembrance was a different power from memory. Besides which, he said, that those who have a great remembrance, have a good understanding, which is equally false; because the imagination, whence the remembrance proceeds, is contrary to the understanding: For to fix things in the memory, and to remember them after they are known, is an act of the imagination, even as writing any thing, and reading it afterwards, is an act of the writer, and not of the paper. According to which, the memory is a passive, and not an active power, as we intimated before, as the blank paper is no more than a capacity for one to write on.

4thly. It may be objected, That if it be true, as we have asserted, that the understanding and memory were two contrary powers, and that one required much driness, and the other much moisture and softness
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of brain, how comes it to pass, that both *Plato* and *Aristotle* affirm, That men of soft flesh have a great deal of understanding, since softness is an effect of moisture?

BUT this difficulty may be thus solv'd: That it imports nothing to a man's wit, whether the flesh be hard or soft, if the brain enjoy not also the same quality; for that, we observe very often, possesses a temperament distinct from that of all other parts of the body. Nay, even when the flesh and the brain are both alike tender and soft, it is a bad-indication for the understanding, and no less for the imagination. Be it as it will, if we consider the flesh of women and children, we shall find, that it is softer and more tender than mens, yet nevertheless men are for the most part of a better wit than women. The natural reason of which, is, that the humours that make the flesh soft, are phlegm and blood, because both the one and the other are moist (as we have already noted) and of these humours, *Galen* has pronounced, that they make men silly and blockish; on the contrary, the humours which harden the flesh, are choler and melancholy, whence proceed the wisdom and knowledge of men. So that to have soft and delicate flesh, is a worse sign than to have dry and hard. And accordingly among men that are of an equal temperament, throughout the whole body, it is very easy to guess at the difference of their wit, from the softness or hardness of the flesh; for if it be hard and rough, it presages a good understanding, or a good invention; but if soft and delicate, it denotes the contrary; which is a good memory with little understanding, and less invention. To discover then if the brain correspond with the flesh, the hair ought to be considered; for if that be thick, black, harsh, and curl'd, it is a sign of a good invention, or a good understanding; but if lank and soft, it is an indication of a good memory, and nothing more. But he that would know, and distinguish, whether it be understanding or imagination, which is betoken'd when the hair is such as we have mentioned, must consider how the youth behaves himself in laughing; for that

passion strongly discovers if the imagination be good or bad.

WHAT the cause of laughter is, many philosophers have pretended to know; but not one has made it intelligible: they only all agree in this, that the blood is the humour that provokes a man to laugh, though none of them have told us what are the particular qualities of this humour, that make a man subject to laughter. *In a phrensy the laughing fits are securer, and the crying fits more desperate*; for the first is made by means of the blood, which is a very benign humour; but the other is no less than an effect of deep melancholy. But we grounding only on the doctrine we have handled, may easily understand what is to be known in this matter. The cause of laughter is no other (in my opinion) than a tacit allowance of the imagination, when it sees or hears some rencounter or accident, which proves very agreeable. And as this power resides in the brain, when any of those things present, it is strait moved, and with it the muscles all over the body; so we often approve sharp and witty sayings, by a nod of the head. But when the imagination is very good, it is not gratified with every passage, but with those only, which are very pleasing; and if they are not such, it receives rather a disgust than pleasure. Whence it comes, that we seldom see men of good invention laugh; and what is yet more considerable, is, that those who rally the most agreeably, and are very facetious, never laugh at their own jests, or those of others; because they have so delicate and fine a fancy, that their own witty expressions, and railleries, are not moving to themselves, nor have all the agreeableness and grace they have with others, who being incapable of the like, are more affected with what appears to them equally new and surprizing. For which reason, the thing spoken, or offered, ought to be new, and unheard-of. Which is not the aim only of the imagination, but also of the other ruling powers in man. Accordingly we find the stomach nauseates the same food it received twice; the sight, the return of the same figure and colour; the hearing, the repetition of the same tune,

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though it be good; and so even the understanding is tired with the same thought. Therefore he that rallies well, laughs not at all at his own witty jests, because, ere they proceed out of his mouth, he knows well enough before-hand what he is to say. Whence I conclude the great laughers, and such as, let the jest be what it will, are extremely moved and tickled by it, want imagination. And therefore those who are very sanguine, as they have a great deal of moisture, which we have affirm'd to be contrary to, and destructive of the imagination, so they also are very great laughers. Moisture has this peculiar, that because of its smoothness and softness, it blunts the edge, and allays the heat; accordingly that agrees best with driness, because it quickens its actions; add to this, that where moisture is found, it is a sign that the heat is slack and moderate, because it cannot resolve and consume it, nor can the imagination with so weak a heat speed its own operations. From whence also it follows, that men of great understanding are often great laughers, because they want invention. As we may read of that great philosopher *Democritus*, and many others whom I have seen and observed. Thus by means of laughter we may discern, if the persons that have hard and rough flesh, and besides that, black and crisp, harsh and hard hair, generally excel in the understanding, or imagination. So that *Aristotle* has been mistaken in what regards the smoothness or softness of the flesh.

5thly, To what we have advanced, That to have a good memory, the brain must be moist and soft, because if it were dry and hard, the figures cannot be so well impos'd thereon; 'tis objected, That however the figures are easily impress'd on a soft brain, a dry and hard one is necessary to make the impressions durable, and that while the one easily take their learning, and as easily forget it, as if the impression, as *Galen* says, were grav'd on water, the other, though more difficult to apprehend, never lose what they have once learned; and therefore on the whole, to learn readily, and retain long, seem incompatible qualities, and which never, or very rarely, meet in the same person.

To this objection 'tis answer'd, That there are two sorts of moisture in the brain; one, which proceeds from the air, when that element is predominant in the composition; and the other from water, by means of which, the other elements are blended together.

IF the brain partake of the first moisture, the memory will be very good, easy to receive, and strong to retain the figures long, because the moisture of the air is very oily, and unctuous, in which the species of things fasten strongly, as may be seen by painting in oil, which, exposed to the sun, or cast into the water, sustains no damage; and if we rub a writing all over with oil, it hardly ever wears out. And even that which is obliterated to that degree, that one cannot read it, is made legible by oil, which gives it a kind of clearness and transparency. But if the smoothness and softness of the brain proceed from any other humour, the argument is strong; for if it receive easily the figure, it also as suddenly wears out, because the moisture of the water has no oil, to which the species could adhere. These two kinds of moisture are distinguished in hair; that which proceeds from air, makes them thick, oily, and greasy; and that from water, slimy and limber.

6thly, 'Tis objected, that 'tis no less difficult to understand how so many figures, as we affect, can be imprinted together in the brain, without effacing one another; for if several seals of different forms are imprinted on wax, the last will force out the rest, or at best there will remain behind only a promiscuous confusion of figures.

To this we may answer, That the figures of things in the brain are not imprinted there like the figure of the seal in the wax, but only by penetrating, remain there fix'd; or after the manner as birds are caught with birdlime, and flies with honey, because these are not corporeal figures, and cannot be blended, nor break in one upon another.

7thly, IT may be objected, How can the memory, by constant exercise, be made more capable to receive the figures, when 'tis certain, that the exercise of the mind,

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mind, as well as of the body, dries and consumes the flesh?

BUT this can be only said, to any prejudicial degree, of immoderate exercise, as well with regard to the body as the mind; for all physicians hold, and 'tis agreeable to the reason of the thing, and to experience, that moderate exercise fattens: And 'tis farther certain in both cases, that habit or use improves both; for porters backs, by frequent burthens, chairmens legs, labourers hands, and watermens arms by exercise, grow more brawny and tough, and more capable of sustaining the fatigues of their respective vocations; and in like manner the faculties of the mind, and the memory among the rest, by moderate exercise and study, may receive great advantages and improvements, as is daily experienced, more especially by every one who has the care of the education of youth.

8thly, 'Tis difficult, say the objectors, to discern how the imagination is contrary to the understanding, as we asserted, if there appear no stronger reason, than to say, that the subtile parts of the brain are resolved and dissolved by much heat, and that there remain behind the grossest and most earthy, since melancholy is allow'd to be one of the grossest and earthiest humours of the body; yet *Aristotle* said, The understanding received more advantage from that, than from any other. The difficulty of accounting for this seems yet greater, when we come to consider, that melancholy is a gross, cold, and dry humour; of all which properties, that of dryness only is favourable to the understanding, those others of grossness and coldness being extremely opposite to it; while choler is of a delicate substance, and of a hot and dry temperament, and is only contrary to the understanding in that one property of heat. Which was the reason that *Galen* ascribes wit and prudence rather to the latter than to the former.

BUT to this may be replied, That there are two kinds of melancholy, one natural, which is as it were the cement of the blood, whose temperament is cold and dry, of a very gross substance, and of no advantage to the wit, but makes men fools, fots and

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giglers, because of a defect in their imagination. The other, call'd *Atra-bilis*, black or burnt choler, which, according to *Aristotle's* opinion, made the wisest men, whose temperament is various, but always dry, and of a very delicate substance. *Horace* reports *Orestes* to have been made such a one, but that he would do no harm to any one, speaking very fine things from the brightness of his choler, and therefore he said, *Fussit quod splendida bilis*. *Serm. III.* *Cicero* own'd, he had a slow wit, because he had no adust choler, and he spoke truth; for if he had, he would not have proved so eloquent; for the men of black choler, want memory, which is generally supply'd by volubility of speech. It has another quality, which mightily helps the understanding, that is to be as resplendent as an agat, by means of which splendor, the brain is illuminated, to the end the figures may be clearly reflected. And this *Heraclitus* meant, when he said, *A dry light makes a most excellent wit*; which splendor, the natural melancholy has not; for the black choler peculiar to that, is sleep and death.

As to *Galen's* ascribing the dexterity of wit and prudence to choler, he was certainly much in the right, if he meant that sort of dexterity which the *French* call *Finesse*, and We in *England* *Wileiness*, *Cunning* or *Craft*; and to this *Democritus* alluded, when being visited by *Hippocrates*, who finding him under a *Plane-tree*, bare-legg'd, and sitting on a stone, surrounded with dead and dead apes, foxes and serpents, and asking him the meaning of this sight, *Democritus* said, That he had been in search of the humour that made men fickle, crafty and deceitful, and that in dissecting those brute beasts, he had found reason to impute these mischievous qualities to choler.

BUT there is another sort of wisdom, which is indeed the only true wisdom, attended with uprightness and simplicity, by which men follow that which is good, and avoid that which is evil. *Galen* says this kind belongs to the understanding, because that faculty is wholly incapable of craft or malice, and is upright, just, frank and innocent. The man who is endow'd

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with this kind of wit, is called upright and simple, and is intirely unacquainted with the little, subtle, undermining artifices of the other. Of this kind of wisdom, the coldness and dryness of melancholy, is a very proper instrument, provided it be composed of very fine and delicate parts.

Lastly, 'Tis demanded, Whence it comes that the assiduous application to study and speculation, renders many knowing and wise, who, at the beginning, appeared not to have the requisite temperament for attaining learning, which if they had had, they needed not to have taken so much pains?

To which we reply, That when a man is engaged in the contemplation of a truth he would know, and does not presently attain it, it may be because his brain is not, at that time, matur'd, as one may say, for that particular study; but fixing a while in contemplation, as soon as the natural heat (that is in the vital spirits and arterial blood) flies to the head, the same causes the temperament of the brain to rise till it arrive at the degree it has occasion for. But however, this is to be said only of those who may be called *slow Wits*, and have the seeds of this good temperament in them, which may be produced by labour and proper cultivation, and relates not to such as are utterly incapable of improvement; for 'tis to be observed, that much plodding does good to some, and harm to others; for if the brain be qualified to attain the due degree of heat, there will be no occasion for deep meditation; and if it pass beyond the point, the understanding is strait disordered, by an overflow of too many vital spirits; by means of which, it attains not to the notice of the truth it is in search of. Whence it comes, that we observe many men speak very well *extempore*, but perform very meanly with premeditation. On the contrary, others have such a slow capacity, because of their great coldness or dryness, that of necessity the natural heat must be a long time in the head to cause the temperament to rise to the degree it wants, and therefore they acquit themselves much better, when they have had

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time to recollect what they have to say, than when they are to speak *extempore*.



C H A P. X.

Each difference of Wit is appropriated to the Science with which it most particularly agrees. Brief Instances thereof.

ALL the arts (said *Cicero*) are settled upon certain universal principles, which being learned with study and labour, the science at length is acquired. Only the art of poetry has this in peculiar, That if God and Nature make not the man a poet, he will never be enabled by rules and precepts to make a verse, which occasioned him to say, *That the study and knowledge of other things depend upon the precepts of art; but the Poet is so by nature; he is only excited by the force of his wit, and is, as it were, inspired with a divine enthusiasm.* But in effect, there is no art or science but has a genius peculiarly fitted for its attainment to any perfection; and every one therefore should apply himself (or his tutors or parents should point it out for him) to the study of that particular science which is most adapted to his capacity; by which means, as we have heretofore observed, those persons who would make a very mean figure in some studies, would greatly excel in others; and we frequently see a native genius forcing itself, as it were, out of the oppressive course of an education contrary to its natural bent, and that almost without a guide or director, into the particular study and business that is more suitable to its talents; of which a multitude of instances, among several sorts of artificers, mechanics, mathematicians and others, might

might be produced, as well among the antients as moderns, which fall so naturally into every man's reading and experience, that 'twere superfluous to attempt to particularize them.

IN order to assist our readers in the discovery of what studies are fit for particular genius's, it is necessary to observe, that there seem to be some sciences that naturally require a good *Memory*, and others that depend more on the *Understanding*: Those most acquirable by means of the *Memory*, are grammar, latin, and all other languages; the theory of the law, positive divinity, cosmography, and arithmetic. Those that belong to the *Understanding* are school-divinity, the theory of physic, logic, natural and moral philosophy, and the practice of the law, of which, for brevity sake, we will give reasons in three or four sciences, which may equally serve for the rest.

AND, first, no considering man can deny, but the attainment of the latin and other languages depends principally on the memory; because the tongues were only an invention of men, to be able to communicate together, and make known their meaning to one another, when the first inventors assembling together, framed words according to their fancy, as *Aristotle* observes, and jointly agreed about the signification of each. From whence came so great a number of words, and so many different modes of speech, with so few rules, and as little reason, that without a good memory it would not be possible, either to comprehend, or retain them by any other faculty. How improper the imagination and the understanding are, to learn the languages, and the different modes of speech, infancy plainly proves; in which, though it be an age wherein the child is least provided with these two faculties, nevertheless, as *Aristotle* observes, he learns any language whatever better than grown persons, though these be much more rational. If then it be true, that in the age wherein the memory flourishes, and the understanding and imagination are low, the tongues are sooner learned than when the memory is in the decline, and the understanding in its full vigor,
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it is certain they are acquired by means of the memory, and not at all by any other faculty.

ARISTOTLE said, that the tongues were not to be learn'd by reason, as not depending upon discourse, and that therefore it was necessary to hear from another the words, and their meaning, and to bear them in mind. In pursuance of which, he proves, That if a man be born deaf, he would infallibly be dumb, because he can't hear from another the sound of the words, nor the meaning given them by their first inventors. That the tongues are no other than an effect of the humour and caprice of men, may be clearly inferred from this, that the sciences may be equally taught in all languages, and that in each, may be spoken and made known, what any one of them would say. The *Romans* (as being lords of the world) finding it was expedient to have a common language, by means of which all nations might communicate together, and themselves be enabled to understand such as came to sue for justice of them, and to treat of matters relating to the public affairs of every province, appointed schools to be erected in all parts of their wide empire, for teaching the *latin* tongue, which by these means has flourished as the universal tongue even to this day.

As for school divinity, it is certain that it refers to the understanding, because the operations of this faculty are to distinguish, to infer, to reason, to judge, and to chuse, and that nothing is done in this science, but to raise doubts from inconveniencies, to answer with distinction, to infer against the answer what may be collected from good consequences, and so to reply again, till the understanding be at ease, and rest satisfied. But the best proof that can be made of this subject is to let you understand how seldom the *latin* tongue, and school divinity, meet in one person, and how it rarely happens that a man be at the same time a good latinist, and profound school-divine. At which effect some more curious being surprized, in taking notice of it, have searched whence it might proceed, and have been of opinion, that school-divinity being

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writ in a harsh and barbarous language, and the ears of good latinists being inured to the pure and elegant stile of *Cicero*, they could not take pleasure in that science. It would be well for these gentlemen, that understand *latin* so well, that this were the true cause, for then by constraint, and otherwise accustoming their ears, they might at length find out a remedy for this inconvenience; but to be plain with them, the defect is not so much in their ears, as in their capacities.

THEY that are good latinists, have most assuredly an excellent memory, for without that they could never prove so expert in a language which is none of their own; and because a great and happy memory is, as it were, contrary to a great and elevated understanding in the same subject, one debases and depresses the other. From whence it comes, that he who has not so exquisite and lofty an understanding (the faculty to which belongs to distinguish, to conclude, to discourse, to judge, and to chuse) gains no great ground, nor makes any considerable progress in school divinity. Whoever is not satisfied with this reason, let him read *St. Thomas*, *Scotus*, *Durandus* and *Cajetan*, who are the leading men in that faculty and profession, and he will find great subtilties in their works, but writ, and delivered, in very coarse church *latin*. For which there appears no other reason, but that these great authors having in their youth very mean memories, proved not more excellent in the *latin* tongue, but applying themselves to logic, metaphysics, and school-divinity, they mounted up to the highest degree of the sciences we admire, because they were endued with a great understanding. At least I can testify this of an eminent school-divine who was a miracle in that science, and yet not only could not reach the elegancies, nor the round periods of *Cicero*, but when he read in the chair, his scholars took notice that his *latin* was very base and mean, insomuch that they being unacquainted with our doctrine, advised him that he should secretly borrow a few hours from the study of school-divinity, and employ them in reading *Cicero*. And taking this as the advice of good friends, he not only endeavoured in private, but publickly to remedy

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it; and entered the form among the rest to improve his *latin*: but what was very remarkable, that during the long time he did thus, he not only learn'd not any thing new, but had almost forgot all the *latin*, such as it was, that he had learned before, so that in the end he was driven to read his lectures in his mother-tongue. Pope *Paul* the fourth, enquiring what divines were the leading men at the council of *Trent*, was told particularly of a certain *Spanish* divine, whose resolutions, arguments, distinctions and answers, were truly worthy of admiration. The pope being curious to see and know so singular a man, dispatched his orders to him to come to *Rome*, to give him an account of all the proceedings in the council. Being arrived, he did him a great many honours, and taking him by the hand, led him out to walk to the castle of *St. Angelo*, and entertaining him in very elegant *latin*, about certain works he intended to make, in fortifying it better, asked his opinion of each of his designs. To which he answered with so much pain, (not being able to speak good *latin*) that the then *Spanish* ambassador, *Don Luys de Requesens*, great governor of *Castile*, took up the discourse for him to relieve him, and to divert the pope to some other matter. In a word, his holiness (who by the way, gave little proof of his infallibility in this point) said to one of his confidants, That it was utterly impossible for a man that understood *latin* so meanly, to be so excellent in divinity as was reported; whereas, had he tried him, instead of language (which is a work of the memory) and in fortifications and buildings (which belong to a good invention) in subjects depending on the understanding, he might have heard divine things from him.

IN the list of sciences which refer to the imagination, we have particularly placed *Poetry*, and this not without good consideration, but to let them know, how far they generally are from having the best understanding, who have a good vein in versifying. Accordingly we shall find, that the same difficulty the *latin* tongue has in uniting with school-divinity, the same, or greater, beyond comparison, is observed betwixt that science and the art of versifying; this

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art being so contrary to the understanding, that for the same reason, he that would set up for a prime poet, must take leave of all the sciences relating to that faculty.

THIS observation of our author's seems beyond all question, made out since his time, in the famous *English* poet, *Pope*, who is the admiration of the age in which he lives, for the charming beauties of his versification, and for displaying in his poetry all the graces of a fine imagination; but who, in the barbarous attempts he has made upon all his cotemporaries, and an obscenity, and filthiness, and virulence almost peculiar to himself, has shewn the coarsest and most deprav'd understanding that ever was blended with those fine qualities in which, as we have observed, he excels.

ARISTOTLE, though he gives not the reason of this, yet notes, as I observed before, that *Marcus* the *Syracusan*, was a better poet after he had lost his understanding than before; and that, *vice versa*, when he recovered his understanding, he lost the excellence of the faculty of versification: To what can this be owing but to the difference of heat in the temperament? for that great degree of heat which is necessary to inflame the imagination in poetry, is too excessive and ardent for the understanding, and accordingly destroys it.

CICERO is an illustrious instance of the truth of this observation, who having a fine understanding, and most capacious soul for the noblest attainments, yet was the most miserable of all poetasters, when he aim'd at making of verses, having not heat enough to inflame his imagination into that divine enthusiasm, which is necessary to animate the faculties of a great poet: This makes *Juvenal*, when he finds *Tully* attempting to celebrate the glories of his own consulship in verse, and complimenting himself with having given to his country a sort of second birth, after his glorious efforts against *Cataline*; among others this being one;

O fortunatam natam me consule Romam!

I say, this makes *Juvenal*, who could not apprehend, that the art of poetry was contrary to such a wit as

Cicero's,

Cicero's, severely lash him in his satires, saying, Had you rehearsed your *Philippics* against *Marc Antony* in such delicate verse, it had never cost you your life.

AND from what has been said, may result the reason of what has been often observed, that the best and most judicious critics very seldom make any great figure in poetry themselves; for that sedateness and coolness which true judgment requires, is, as has been said, very incompatible with that heat and fire which is requisite to enliven and warm the imagination. Of our own nation, Mr. *Rymer* might be named to exemplify this observation, and others would add Mr. *Dennis*, though some of his works are not without their poetical merit.

THE divine *Socrates* is another instance of the truth of our observation, who, after he had learned the art of poetry, yet with all his rules and precepts, could never so much as make a verse; and yet his understanding was so great, that he was pronounced by the oracle of *Apollo*, the wisest man in the world.

WHEN therefore we observe, that a young man has a good vein in making verses, and upon the first essay, hits upon abundance of rhimes, we may generally conclude that he runs a great risque never to attain, in any eminent degree, the *latin* tongue, logic, philosophy, physick, school-divinity, or the other arts and sciences relating to the understanding and memory: And it is further observable, and which still more corroborates this observation, that the fine vein of low humour that runs through the performances of our present facetious dean of *St. Patrick's*, seems utterly to unqualify him for the severer studies; and a body of divinity, or collection of sermons of this uncommon genius would meet with a very surprizing reception in the world, were either to be offered by way of subscription. Such spirits as these amuse themselves in their youth with the romances of *Cleopatra*, *Cassandra*, *Don Bellianis*, *Amadis of Gaul*, &c. because they are works of imagination, and in their riper years are able to produce out of their own funds, the monstrous and incoherent figments of *Laputa*, and the *Houynhoms*, and even from the history of *Tom Thumb* create a

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Lilliputian nation, and by way of opposition as easily strike out of their fly-blown imagination a gigantic *Brobdingnagian*; or do any other thing, in which much fancy, and little judgment, is required.

WE might further strengthen our argument by the examples of the organists, choristers, and music-masters, of almost all species and denominations, whose wit is improper for *latin*, and all other sciences pertaining to the understanding and memory. But by these three examples already produced of the *latin tongue*, of *school-divinity*, and of *poetry*, we have said enough to demonstrate the truth of our doctrine. However, it may not be amiss to make two or three other remarks on this head, which will be the more acceptable, because some instances of the truth of them must fall under every one's observation.

AND first we may assert, that fair writing is a work of the imagination, and we see few men of great understanding that write a fair hand. Amongst others, I knew a most learned divine, who being ashamed to see his ill hand, ventured not to write to any body, nor answer those that writ to him, insomuch that he resolved to cause a master to come privately to his house, to teach him to write tolerably. And having laboured several days at it, and lost his time, he gave it over, leaving the master surprized to see a person so very able in his profession, so incapable of writing. And we might subjoin the instance of a renowned *English* senator, now living, [*A. 1730.*] whose conceptions are great and noble, whose sense is masculine and solid, and capacity for public affairs, the most distinguished; who has written admirably well, and discourses on all occasions fluently and with elegance; and who yet, with the utmost application, has never been able to write a tolerably legible hand, and is oblig'd in his most private and arduous affairs to have an amanuensis, to whom he is nevertheless able to dictate with distinguishing excellence: This gentleman, like the divine, had a master to learn him to write, and even made, by incessant application, some little progress towards the attainment of a legible hand; but he could not hold it,

it, and returned soon into his usual barbarous *Arabic* characters, and can only write his name to be read distinctly, except by those intimately conversant with his hand. And would any man observe, and take the pains to reflect on the poor scholars, that get their livelihood in the universities by copying in fine characters, they will find they understand but very little grammar, as little logic, and no more philosophy; and if they study physic, or divinity, they never sound the depth of any difficulty. And therefore the boy that can draw with his pen a neat-limb'd horse, or a well-shaped man, and make fine flourishes, and bold strokes, should not be set to the study of any science, but rather to a good painter, whereby his natural ability may be improved, and he may be excellent in that art, when he might never excel in any other.

To read with a good grace, discovers also a certain kind of imagination, and if a youth takes to read well, and to any great degree of excellence, he should not lose his time in learning, but only think of getting his livelihood by reading of lectures and processes. Now here is a thing worthy of consideration, which is, that the difference of imagination which makes men agreeable in conversation, and good at raillery and repartee, is contrary to that which is necessary to a man to read gracefully; so that very few of the former can read volubly, but with hesitation, and mistaking one word for another.

THE game of *Chess* is one of the things that best discover the imagination. And therefore he who has the subtle gambets in that play, for ten or twelve moves all together, is like to make a poor figure in the sciences which depend on the understanding and memory; if he does not unite two or three faculties together, as we have already observed. And if a certain very learned divine, of my acquaintance, had understood so much, he would have been satisfied in a thing that gave him great trouble. This gentleman playing often with his domestics at *Chess*, and being beat as often, said (in heat of passion) what is the meaning of this! Thou that understandest neither latin, logic, nor divinity, (though
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thou hast studied them) yet thou win of me! Is it possible thou shouldst have a better wit than I? The whole mystery of this was, that the master was a man of great understanding, by which means he attained all the subtilties of school-divinity; but wanted the difference of imagination, which is necessary to chefs-play; and his play-fellow had a bad understanding and memory, but a very subtil imagination.

THE students who keep their books in good order on the shelves, their chambers neat and clean, every thing in its proper place, and upon its own pin, have a certain difference of imagination very contrary to the understanding and memory. Spruce and beautiful sparks, who won't suffer the least hair or wrinkle on their cloaths, have that same sort of wit, which proceeds without doubt from the imagination.

THOSE who converse agreeably, who are witty in expression, and know how to droll well, have a certain difference of imagination very contrary to the understanding and memory. Therefore they are seldom good grammarians, logicians, school-divines, physicians, or lawyers. If they are practised in business, and in the intrigues of the world, dextrous in accomplishing whatever they undertake, ready at every turn to speak, and to answer to the point; they are fit for the courts, and to be solicitors and attorneys in causes, for merchants and factors, to buy and sell; but not for learning. Herein the vulgar are deceived, who observing some men of indifferent education, attain to wealth and distinction in pursuit of such occupations and employments, on which address and solicitation depend, presently imagin they would have proved singular men, had they been brought up to learning; when in truth, there are no genius's more repugnant, and more contrary to it, generally, than theirs.

CHILDREN that arrive late at the use of speech, have in their tongue and brain too much moisture: as this wears off in tract of time, they become very fluent, and great talkers, because of the great memory they acquire, as their moisture is abated. Which, as we formerly noted, once happened to that cele-

celebrated orator *Demosthenes*, at whom (as we have said) *Cicero* was surprized, being of so rude a speech in his youth, and when a grown man, so very eloquent.

YOUNG men also, who have a good voice, and have by exercise dilated the passages of their throat, are very unfit for all the sciences, because they are cold and moist, which two qualities united together (as we have already affirmed) destroy the rational part. The scholars who punctually learn, and repeat the lesson word for word, as they have it from the master, promise a good memory, but at the expence of their understanding.

Henry Newman's Book 1730



C H A P. XI.

That eloquence and politeness of speech are seldom to be found in men of great understanding.

ONE of the graces that inclines the vulgar to think a man very wise and prudent, is to hear him speak with great eloquence, to observe his discourse adorned and embellished with choice of select and significant words, to bring many pertinent instances of the subject in question; though in effect this happens not but where there is an union of the memory and imagination in a degree and medium of heat, that cannot resolve the moisture of the brain, but serves only to raise the figures, and makes them boil or ferment, by means of which many things are represented to the mind to be said. It is impossible that the understanding should be found in this union, because, as we have already said and proved, that faculty abhors the heat extreamly, and can no more consist with moisture. Which doctrine, had the *Athenians* known, they

they would not have been so much surprized to see so wise and knowing a man as *Socrates*, want the gift of utterance, inasmuch as they who were ignorant of his worth, said, That his speeches and expressions resembled a chest, plain and unpolished without, but when opened, had within it exquisite carving, and admirable figures. In the same error were they, who pretending to give a reason of the obscurity and bad stile of *Aristotle*, said, That industriously, and to gain to his works the greater authority, he affected that jargon, with so few figures, and ornaments of speech. And if we consider also the difficulties of *Plato*, and his concise sentences, the obscurity of his reasons, and the ill connexion of his discourses, we shall find, that it was owing to the reason we have assigned: But what shall we say to *Hippocrates's* works, how he left out the nouns and verbs, the ill disposition of his sayings and sentences, the ill connexion of his reasons, and, in a word, how few things presented to his mind to clear up, and lay the foundation of his doctrine? The great *Virgil* is said to have been so slow of speech, that he passed under great disadvantages as to his conversation, and was thought to be little better than a blockhead, by those who were not acquainted with his divine perfections in the poetical capacity. And who would dare to confirm this doctrine by such an instance as *St. Paul*, and affirm, that he was a man of vast understanding and bad memory, (but such a one with all his natural abilities as could not speak with any ornament and politeness) had he not owned it himself, in these words; *I suppose I was not a whit behind the very chiefest apostles; but though I be rude in speech, yet not in knowledge*, 2 Cor. xi. Which difference of wit was so accommodated to the preaching of the gospel, that it was scarce possible to chuse a better, because there was no need on that occasion of much eloquence, or great ornaments of speech, since the skill of the orators of those times lay most in imposing upon their auditors falsities for truths, to persuade the people by the force and subtilty of rhetoric, that what they received for good and profitable, was quite contrary; as, to maintain, that it was better to be poor than rich, sick than well,

well, ignorant than knowing, and a thousand other such things, which were manifestly opposite to the received opinion. For which reason they were called by the *Jews*, *Gevanin*, as much as to say, sophisters.

SAY then, that God had made choice of an eloquent preacher, possessed of all the ornaments of speech, who should go to *Athens* or *Rome*, and teach, that at *Jerusalem* the *Jews* had crucified a man, who was the true God, and that he died of his own good will and pleasure to redeem sinners, and that he rose again the third day, and ascended into heaven, where he now is; what would the auditory think, but that this proposition was in the number of those vain and foolish ones used by the orators to persuade by the power of their art? For thus much St. Paul says, *Christ sent me not to baptize, but to preach the gospel; not with wisdom of words, lest the cross of Christ should be made of none effect*, 1 Cor. i. St. Paul's wit was very proper for this ministry, because he had a capacious understanding, to defend and prove in the synagogues, and amongst the gentiles, that *Jesus Christ* was the *Messiah* promised in the law, and that no other was to be expected; but with this, he had but an indifferent memory, so that he could not embellish his discourse with persuasive and moving speeches; and this was the difference of wit the preaching of the gospel required. Nevertheless I shall not go about to infer from hence, that St. Paul had not the gift of tongues, for it is certain, that he spoke them all as readily as his own. Neither shall I maintain, that to defend the name of *Jesus Christ*, the strength of his understanding was sufficient of itself, without the gifts and particular assistance that God gave him for that purpose. All that I pretend, is, to affirm that supernatural gifts are much more efficacious when they meet with a suitable disposition, than when they fall upon a sot and a blockhead. To this alludes the doctrine of St. *Ferome* in his proem upon *Isaiah* and *Jeremiah*, demanding what is the reason, that, though it was the same holy spirit which spoke in both their mouths, *Isaiah* delivered what he writ with so much elegance, and *Jeremiah* hardly knew how to speak?

Speak? He answered, that the holy spirit accommodates itself to the natural manner of proceeding of each prophet, unless grace changes their nature, or teaches them a new language to deliver their prophecies in. You must know then, that *Isaiah* was a nobleman, bred at court, and in the city of *Jerusalem*, for which reason his discourse was more elegant and polite; but *Jeremiah* was born and brought up in a village near *Jerusalem*, called *Anathoth*, so that in his stile he was coarse and rude as a peasant, and such a stile the Holy Ghost made use of in the prophecy he inspired him with. The same may be said of *St. Paul's* epistles, that the truth of the holy spirit presided in him when he writ them, to the end that he might not err, but that the language and manner of speech was no other than the language and manner of speech natural to *St. Paul*, accommodated to the doctrine he taught; because the truth of school-divinity abhors a multiplicity of words.

THE knowledge of tongues, and the ornaments and politeness of speech accord admirably with positive divinity, because that faculty belongs to the memory, and is no other than a mass of orthodox sayings, and sentences, cull'd out of the holy fathers, and from sacred writ, and treasured up in that faculty, in the same manner as a grammarian selects the fine flowers of *Virgil*, *Horace*, *Terence*, and other *latin* poets he reads, and, as occasion presents, pertinently cites some passages from *Cicero* or *Quintillian*, to make shew of his reading to his auditors.

THEY that are furnished with this union of imagination and memory, and diligently collect whatever has been said and writ, that is considerable in the science they profess, and quote them at due time and place, with the ornaments of good language, as having already found in all the sciences so many things; appear very profound in the opinion of those who are ignorant of our doctrine, though in effect they are but superficial, and will discover their defect as soon as they are sifted to the bottom, of what they deliver with so much assurance. And the reason is, that the

understanding, to which appertains the knowledge of the truth of things from their root, is not agreeable with the abundance of fine speeches. 'Tis of these the holy scripture speaks, *The talk of the lips tendeth to penury*, Prov. xiv.

SUCH as have these two faculties, the imagination and memory joined together, boldly attempt the interpretation of holy scripture, conceiting, because they understand a great deal of *hebrew*, *greek*, and *latin*, that it is easy for them to give the true sense of the letter: But after all, they are out; first, because the words of holy scripture, and its manner of speaking, have many other significations than ever even *Cicero* knew in his tongue; and secondly, because such people want understanding, which is the faculty that discerns whether the sense be orthodox or not.



CH A P. XII.

That the theory of divinity belongs to the understanding, and preaching (which is the practice) to the imagination; and of the requisites of a good orator.

THIS a point much controverted, not only amongst the wise and learned, but even such as has not escaped the very vulgar, who daily ask the reason, whence it comes that a divine who is a great school-man, sharp in dispute, ready in his answers, reads and writes with admirable learning, nevertheless when he gets once into the pulpit, frequently knows not how to preach; and on the other hand, when a man is an excellent preacher, eloquent, acceptable, drawing all the people after him, it is a great miracle if he knows much of school-divinity.

No man till now has been able to give any other answer than to attribute all this to God, and to the distribution of his gifts; and I own it is very well done, when they know not the particular cause. We have in a manner solved this doubt in the preceding chapter, where we have asserted, that the theory of school-divinity pertained to the understanding; whereas preaching (which is the practice) is a work of the imagination. And accordingly as it is difficult to join in the same brain a good understanding with a great imagination, so it cannot well be, that a man should at the same time be a great school-divine and a famous preacher. And 'tis certain, that almost all the graces, by means of which good preachers draw the people after them, and hold them charm'd and ravish'd, are but a work of an excellent imagination, and in part of a happy memory; for, to say nothing of the rules of the arts of logic and rhetoric, which are best attained by persons of a lively imagination and good memory, and besides, the particular benefit such divines pretend from their doctrine, their principal study is to seek out a fine text, to which they may pertinently apply many thoughts, and fine passages drawn out of sacred writ, holy fathers, poets, historians, physicians, and lawyers, skimming lightly, as it were, over the surface of every science, and aiming at eloquence and the fine turning of a period, to please the ears of their auditory, rather than to enter into the understandings; by which means, with the help of a good memory and a lively imagination, they attract their hearers, and gain the reputation of good orators; for almost all-mankind are of the same species, and are much sooner taken by sound than sense: while the profound genius who plods on to the reason of things, and penetrates to the very bottom and foundation of the sciences, despising the sound, and adhering to the sense only, has his arguments lie too deep, and his good sense too close for common capacities to fathom, and however he may be esteemed among the few of solid understandings, yet he must be obliged to pen and ink, to make his excellent endowments known; and in this case indeed he builds

for posterity, and his name flourishes, when that of the superficialist, who in the pulpit carried all before him, is no more remembered.

BUT however, since the powers of the imagination and understanding are thus opposite to, and incompatible with one another, and since the genius's that are able to make a figure by means of the former, are much more numerous than the others, let us briefly lay down by what means this far greater part of mankind may succeed in attaining the requisites of a good orator, which will be so many demonstrations of the truth of our doctrine, that the practick part of preaching is a work of the imagination rather than of the understanding.

WE have said, that whatever is spoke in good figure, close to the purpose, and on a sudden, all pleasant jests, allusions, and comparisons, are the gifts of the imagination: Wherefore the first thing a perfect orator should do when he takes his theme in hand, is to look out some *Argument*, some apposite sentences and passages, which he may amplify, and prove from his stock of reading, and to make choice of no words but such as are well-sounding to the ears, which choice belongs principally to the imagination.

THE second good quality, is to have an exuberant *Invention*, and a large stock of reading; in order to amplify, and prove his subject by proper citations, in which case a quick imagination is like a setting-dog, that hunts and brings the game to hand. For this reason we have said before, that heat is the instrument with which the imagination acts; inasmuch as this quality raises the figures in making them boil or ferment, as it were; so that we discover by this means all we aim at, and if there be nothing more to consider, the imagination has power not only to compose figures of things possible; but also to join sometimes such as are next to impossible, in order to diversify and imbellish the subject.

IN lieu of invention, orators may help themselves with much reading and a good memory, where the imagination fails; but after all, book-learning is bounded
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and limited, and the proper invention runs free like a good fountain, whence daily flow fresh streams of living water, that overflow and impregnate the adjacent plains.

The third property a good orator ought to have, is *Order*, to know how to dispose what he has invented, and to reduce every thing to its proper place; in such sort as one thing may bring in another, and the whole correspond in a just proportion of all the parts, to the end that there may arise a true figure: Which grace (when it is not natural) is wont to give a great deal of trouble to preachers, who find in books many things to say, but have not the skill to reduce them to their proper place. It is certain, that this property of ordering and distributing, is a work of the imagination, because it has the name of figure and correspondence.

THE fourth property good orators ought to have, and the most important of them all, is *Action*; by which they give, as it were, a life to what they say, moving the auditors, and engaging them to believe that to be true, which they endeavour to persuade. And of so great concern is this gift to preachers, that a sermon of common matters, and of small moment, without either invention or disposition, shall fill the people with admiration, if animated with action; which may be called in another word, the spirit and life of elocution.

THERE is in this, one thing highly remarkable, which shews how much this gift can do, which is, that the sermons that appear extremely well, as they are set off with all the advantages of action and liveliness of the orator, flag exceedingly when they are committed to writing, or come once to be read: the reason of which is, that it is impossible to represent with the pen, the action and gestures which give it all the advantages in the pulpit. There are other sermons go off better in reading, and will not bear preaching without book, because some passages therein seem to be, as it were, narrative only, and require not action. Which occasioned *Plato* to say, that the style to be observed in speaking is very different from that in writing well; and for this

reason we see abundance of men, who talk very well, write ill; and others, on the contrary, write very well, and talk ill. All which is to be referred to action, which without doubt is a work of the imagination, since all that we have said of it carries with it figure, correspondence, and good consonance.

THE fifth property an orator ought to have, is to know how to *apply well*, and bring proper instances, and good allusions, which takes with the auditory more than any thing else; for what is taught by a good example is easily understood, and without that the arrow flies over their heads. Accordingly *Aristotle* demands, *Why those that hear orators take more pleasure in examples and fables brought to prove what they would persuade, than in the arguments and reasons they produce?* To which he answers, that by examples and fables men learn best, because it is a proof that regards the sense: but it is not so with arguments and reasons; for to be capable of them requires a large understanding. Therefore *Jesus Christ* our Redeemer made use of so many parables and comparisons in his discourses, because by their means he made many divine secrets better understood. But this is certain, the invention of parables and allusions is the work of the imagination, because, as we have already often said, the same carries figure, good correspondence and similitude.

THE sixth property of a good orator is, that his *language* be elegant and unaffected; that he use refined terms, and many quaint and free expressions, which graces we have heretofore proved in part to pertain to the imagination, and in part to a good memory.

THE seventh is contained in these words of *Cicero*, *That he ought to be furnished with a good Voice, a free action, and a natural gracefulness*; a voice clear and well-sounding, tuneable to the auditory, not harsh, hoarse, or too squeaking. And though it be true, that this proceeds from the temperament of the breast and throat, and not from the imagination; yet sure it is, that from the same temperament from which is derived a good imagination (which is heat) comes also a good voice. Which falls out altogether to our purpose,

pose, for the school-divine being of a cold and dry temperament, cannot have the organ of the voice good; which is a great advantage in the pulpit: So that when we hear any good voice, we may immediately affirm it springs from the great heat and moisture of the breast, which two qualities when they mount up to the brain, destroy the understanding, but improve the memory and imagination, which are the two powers made use of by good preachers to take with their auditory.

THE eighth property of a good orator, as *Cicero* said, is to have a ready and fluent *Tongue*, which is a gift that cannot light on men of great understanding; for to be so ready, there is required much heat and a moderate dryness, which is not to be found among the melancholic, whether naturally or by adustion. *Aristotle* proves it in asking this question, *Why those who have an impediment in their speech are held all to be of a melancholy complexion?* Which proceeds from this, that the melancholic have always abundance of froth and spittle in their mouths, through which disposition they have a very cold and moist tongue, which are two qualities that render it heavy, and as it were paralytic, so that it cannot follow the imagination fast enough.

THE choleric unmoved speak well and readily, because they then have the degree of heat requisite to the tongue, and to a good imagination; but being put into a passion, the heat rises a degree higher than it ought, and perturbs the imagination. The flegmatic being unprovoked, have a very cold and moist brain; whence nothing offers to their speech, and their tongue is relaxed with too much moisture; but when they are vex'd, and their gall is once stirred, the heat gets a degree, and quickens their imagination, which occasions much to offer to be said, and their tongue is freed from impediment when once it is heated. Such have no good talent in versifying, for they are cold of brain; but when they are heated, they make better verses, and with more ease, against those that nettle them: To which purpose *Juvenal* said,

Si natura negat facit indignatio versum.

What nature denies, wrath oft supplies.

THRO' this defect of tongue, men of great understanding, cannot be good orators, nor good preachers, and particularly inasmuch as the action requires they should speak sometimes high, and sometimes low, and that such as are slow-tongued, cannot pronounce without bawling with open throat, which is one of the things that tire the auditors: Accordingly *Aristotle* inquires, *Why those of slow speech cannot speak low*, to which he answers very well, that the tongue, which is as it were glued to the palate by the great moisture, cannot disengage it self but by a forceable effort, and not by gentle means.

THUS have I proved that the good natural qualities a perfect orator ought to have, arise from the imagination, for the most part, and some from the memory: and if it be true that the great preachers of our times please the people because they are furnished with the same qualities we have spoken of, it follows then, that he who proves an eminent preacher, knows very little of school-divinity, and he that is a good school-divine cannot preach, through the great contrariety that the understanding carries to the imagination.

IN fine, 'tis proved by common experience, that tho' the orator studies natural and moral philosophy, physics, metaphysics, the laws, the mathematics, astrology, and all the other arts and sciences, yet he knows no more of them than the flowers, and retains only the most received propositions, without fetching from the root the reason and cause of any of them; and so pierces no deeper in philosophy, which belongs to the understanding, than a superficial knowledge of the nature of things, which may serve to brighten and improve his imagination only.

BUT since we have allowed this difference of wit as improper for the function of a preacher, and that we are obliged to give and assign to each difference of wit, the

the science that suits best in particular with it; it is convenient to assign what difference of wit he ought to have, to whom the office of preaching is trusted, which is of so great importance to a christian state. You are to conceive, that though we have already proved, that it implies a natural repugnance to associate a great understanding with a large imagination and memory, yet is there no rule so general in any art but admits of some limits and exceptions. For, when nature is strong with all her forces, and meets no obstacle, she makes so perfect a difference of wit, that she sometimes unites in one a great understanding with a great imagination and memory, as if those powers were not contrary, or held any natural opposition.

THE same is the most proper and convenient qualification for the employment of a preacher, if it could be found in many persons, but they are so few, that not one of a thousand wits can be found under this consideration. And therefore we must look out another difference of wit more familiar tho' less perfect than the former. And this seems to be the melancholic, who by adustion unite a great understanding with a great imagination; but they generally are weak of memory, because the same adustion dries and hardens the brain. These make good preachers, at least they are the best to be found, next those perfect ones we have spoken of; for though they are weak of memory, their own invention is so large, that their very imagination serves them in lieu of memory and remembrance, supplying them with figures, and furnishing them wherewith to speak, without standing in need of any thing.

Now that melancholy by adustion has this variety of temperament, of cold and dry, for the understanding, and of heat for the imagination, *Aristotle* declares in these terms, *That melancholy men are of temper various and unequal, because the adust choler is a humor very various and unequal, it being equally capable of hot and cold in extreams by turns.*

THE tokens by which this temperament may be discerned, are very evident; their complexion is dark,

their eyes red, the head dark brown, and often bald; flesh hard and hairy, great veins; they are good company, and affable, but lustful, proud, stately, crafty, double, injurious, and revengeful. This is to be understood when melancholy is kindled, for if it be cooled, forthwith arise in them the contrary virtues, chastity, humility, fear, and reverence of God, charity, mercy, and contrition. Now vice prevails in them, and then virtue; but with all these faults, they are the most ingenious, and most able for the service of preaching, and for all sorts of things wherein worldly wisdom is required; because they have a great understanding to find the truth, and a powerful imagination to persuade. In the third rank are men of great understanding, without imagination and memory; these preach not gracefully, but preach sound doctrine, and, as we have hinted, are better fitted to write than to preach, by which they will build to themselves a sort of immortality by their works.



C H A P XIII.

That the theory of the Laws pertains to the memory; pleading causes and judging them (which is the practice) to the understanding.

AS the lawyer is obliged to pay an implicit regard to the laws, which are to be his absolute rule and guide; 'tis easy to assign the species of wit most adapted for this study; which must necessarily depend on the memory, rather than the understanding; for if he is to have the principal regard to the number of the laws, as they are distinguished from one another by multitudes of exceptions, restrictions, enlargements and

and explanations, 'tis more to his purpose to have by heart what is determined by the law in each case that occurs, than to discourse or reason after what manner it ought to be determined; for one is necessary, and the other impertinent; no other opinion being sufficient to carry the point but the decision of the law. So that it is certain, that the theory of the law belongs to the memory, and not to the understanding or imagination; for which reason the laws are so entirely positive, and the lawyers have their understandings so determined by the will of the legislature, that they cannot interpose their own opinion: But where they are in doubt what the law has declared, when their clients consult them, they are allowed to say, I will look for the case in my books, which should the physician say when they come for cure of any disease, or a divine in a case of conscience, they would pass for men of small ability in their professions. And the reason of it is, that these two last sciences have their definitions and principles universal, under which particular cases are contained; but in the faculty of the law, each law contains only one case, the following law not depending on it, though they are placed both under one and the same title. Wherefore it is necessary to have notice of all the laws, to study each in particular, and to lay them up all distinctly in the memory.

BUT this that we have now said, is to be taken with a principal regard to the *theory* of the law; which will enable a man to be an excellent chamber-council, as we call them; but the *practic* part, which is to plead and reason at the bar, or on the bench, and to expound and reconcile the seeming different and jarring intentions and meanings of the laws, requires the powers of the imagination and understanding to be joined to those of the memory, and a man thus formed is capable of making the greatest figure in human life.

THE lawyers who are furnished with such a wit and ability, do not always tie themselves down to the strictest terms of the law; they seem to be rather qualified for legislators, of whom the laws go themselves a begging

what they will have them determine, and depend in some measure for their construction, on the powers of their eloquence and judgment; especially in those cases which are sometimes subject to variation from the different circumstances of time, place, person, means, matter, cause, and the thing it self; all which considerations frequently diversify the determination of the law. Whence it results, that for the knowledge of the theory of the law, a great memory, with an indifferent understanding, suffices; while the pleader and practical lawyer, can better dispense with a bad memory than a good understanding; seeing that to supply the defect of memory, there are many remedies, such as books, tables, alphabets, and several other inventions of men; but if the understanding be defective, there is no manner of remedy for that. As for causes and pleadings, each advocate gives his opinion the best grounded upon law he can; but after all, he cannot know certainly by any art if his understanding has composed such a judgment as true justice requires; for if one lawyer proves in form of law, that the plaintiff is in the right, and the other denies it also by way of law; by what expedient shall it appear, which of the two reasons better? The sentence of the judge makes no demonstration of true justice; nor can it be called success, because his sentence amounts to no more than an opinion, and he does no other than fall in with one of the council. And to increase the number of learned men in the same opinion, is not an argument to believe that their sentiment is the truth; for 'tis certain, that many weak capacities (though they join together to discover some dark and hidden truth) shall never arrive at the point or degree of strength, as a single one that is of a deeper reach.

AND that the sentence of the judge makes no demonstration of the truth, is clearly seen, in that it is frequently reversed in a higher court, where they very often judge after another manner; and what is yet worse, it may happen that the inferior judge may have a better understanding than he before whom the appeal lies, and his opinion may chance to be more conformable

formable to reason. That the sentence of the superior judge, is no more a sufficient proof of justice, is a thing yet more manifest; for we see every day that in the same cases (without adding or diminishing any thing) and from the same judges, quite contrary sentences issue. And he who has already been once mistaken, in confidence of his own reasons, may very well be mistaken again; so that his opinion is the less to be depended upon, because, *He that is once in the wrong, is ever presumed in the wrong*, says the wise man.

PLEADERS observing the diversity of opinions amongst the judges, and how each is sway'd by the reason that seems most to prevail with him, and that sometimes they are concluded by one argument, and sometimes by another quite contrary, thereupon they boldly undertake to defend any cause indifferently in the negative or affirmative; the rather, because they see by experience, that on one side and the other, they may obtain sentence in their favour. And so it comes to be verified, what wisdom has said, *That the thoughts of men are full of fear, and their foresight uncertain*. The remedy then for this, since the reasons of the law remain without proof and experience, is to make choice of men of great abilities to be judges and pleaders, inasmuch as *Aristotle* says, the reasons and arguments of such are as firm and riveted as experience itself. But the best remedy, is, if possible, to avoid going to law at all, as well for its intolerable expence and tediousness, as for its uncertainty, and the fallibility, if not prepossession and partiality of the judges themselves.

WE have before observed, that if he who makes his course in philosophy, does not begin in a month or two, to reason, and raise some objections, and if there come not to his mind arguments and answers upon the matter treated of, he has no understanding at all; but if he prove towardly in this science, it is an infallible sign, that he has the right understanding for the law, so that he may out of hand apply himself to it, without the least scruple.



C H A P. XIV.

That the theory of Physic belongs part to the memory, and part to the understanding; and the practice, to the imagination.

THE perfection of a physician consists in two things, which are absolutely necessary to carry him on to the end of his art. The first is to know from a right method, the precepts and rules of curing man in common, without descending to particulars. The second is, to be long exercised in the practice of physic, and to have visited a great number of patients; for neither do men differ so far from one another, but that in many things they agree, nor are they on the other hand, so like, but that there are in them certain idiosyncracies, of such a nature, that they cannot be told nor writ, nor taught, nor gathered, so as to be reduced to art; but to know them is only granted to him that hath often seen and had them in practice.

It fares the same with the four elements, and the four first qualities, hot, cold, moist, and dry, from the harmony of which spring the life and health of man, and of so small a number of parts, nature makes so many disagreeing proportions, that if a hundred thousand persons were begot, each would have his state of health so proper and peculiar, that if God miraculously should on a sudden change the proportion of these four first qualities, they would all remain sick, except it may be two or three, who by great chance would have the same harmony of temperament. From whence two consequences may be necessarily inferred; the first, that every man who shall fall sick, is to be cured conformably to his particular proportion; so that if the physician restore him not to his first proportion

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of humours and qualities, he shall never be well cured. The other is, to perform this as it ought, there is need that the physician should have seen and dealt with the patient several times in his health, to the end that when he falls sick, he may judge how far he is off from health, and to what point he is to restore him by his remedies; and this last reason is so obvious, that we need only mention it; tho' the importance of it is not sufficiently attended to in the present practice of physick, in which the apothecary shall be permitted to recommend generally a stranger to the patient and his constitution; and the event of it too often fatally shews the folly of this inconsiderate error.

BUT as to the first point, which is to understand and know the theory and composition of the art, *Galen* says, it is necessary to have a great understanding, and good memory; because physick partly consists of reason, and partly of experience, and history; for the one, he must have understanding; and for the other, memory; and because it is very difficult to join these two powers in a predominant degree, of necessity the practical physician must be defective in the theory; accordingly we see a great many physicians very learned in *greek* and *latin*, great anatomists, and botanists (which are works of the memory) that being put to argue, dispute, and search out the reason, and cause of each effect (all which belong to the understanding) make no figure at all. The contrary happeneth in others, who shew abundance of wit and capacity in the logic and philosophy of this art; but if they be put to *latin* and *greek*, to plants and anatomy, never come off with credit; because they are destitute of a good memory. For this reason *Galen* says, That it is no cause of wonder, that in so great a number of men that study physick, there are so few good physicians; and giving the reason of it, he says, That a wit requisite to this science is hardly to be found, neither a master that can teach it in perfection, nor a scholar that studies it with sufficient care and exactness.

THO' what *Galen* has asserted in this case be true, yet he has not specified wherein the difficulty lies, as we will do;

do; namely, because it is so difficult to unite a great understanding with a good memory; and because there is a repugnance between the understanding and imagination. For that the imagination, and not understanding, is the power of which the physician makes use, in the knowledge of the cause and cure of particular diseases, is very easy to prove, according to the doctrine of *Aristotle*; who says, that the understanding cannot know individuals, nor distinguish one from the other, nor discern the time and place, nor other particularities, which make men disagree amongst themselves, and that each one is to be cured after a different manner; and the reason of it is, (according to what vulgar philosophers deliver) that the understanding is a spiritual faculty, which cannot be affected by singulars, as being material. For this cause *Aristotle* said, that the sense is of particulars, and the understanding of universals. If then cures are of particular persons, and not of universals (which are both ingenerable and incorruptible) the understanding will appear to be a power very impertinent in working of cures.

The difficulty lies in discerning why men of great understanding cannot have good outward senses for particulars, these two powers being so contrary one to the other; and the reason is very clear, which is this, That the exterior senses cannot act well, if not assisted by a good imagination. Which we may prove from the opinion of *Aristotle*, who being to declare what the imagination is, says, it is an impression struck from the exterior sense; in the same nature as colour (multiplying with the thing colour'd) affects the eye: For so it fares, that the same colour which is in the crystallin humour tinctures the imagination, and there impresses the same figure that was in the eye: And if you demand, of which of these two kinds the notice of particulars is made? all philosophers answer, and very well, that it is the second figure which affects the imagination, and by both the notice is made. But from the first, which is in the crystallin humour, and the visive faculty, springs no notice, if the imagination be not intent. Which the physicians prove plainly, say-

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ing, that whenever the flesh of a sick man is lanced, or cauterized, and he apprehends no pain, it is a sign, that the imagination is engaged in some deep speculation: We see the same by experience in those that are sound; for if they are deep plunged in some speculation, they see nothing before them, nor hear, though they are call'd, nor taste meat, savoury or unsavoury, though in their mouths. Wherefore it is certain, that the imagination forms the judgment, and notice of particulars, and not the understanding, or outward senses. Then it follows well, that the physician, who is very expert in the theory, because he has a great understanding, or a good memory, of necessity will prove an ill practitioner, inasmuch as his imagination will be lame. As on the contrary, he that shall be a very able practitioner, undoubtedly will be but a mean theorist; for a great imagination cannot well be united with a good understanding and memory. And this is the reason why none are so consummate in physic, as never to fail in their cures; for not to fail in their performances, there is need to know the whole art, and to have a good imagination to reduce the same to practice; but these two things, as we have proved, are incompatible.

THE physician never attempts the cause and cure of any disease, but that he secretly frames to himself a syllogism in *darii*, unless he be but an empiric: And the proof of the first position of his premises belongs to the understanding, and the second to the imagination. For which reason, the approved theorists, ordinarily err in the *minor*, and the expert practitioners in the *major*: as if we should speak in this manner; All fevers that depend on cold and moist humours are to be cured with medicines, hot and dry (in taking the indications from the cause): But the fever which affects this man, depends on cold and moist humours; Therefore it must be cured with medicines hot and dry. The truth of the *major* is proved by the understanding, because it is an universal proposition, that cold and moisture require heat and dryness to moderate them; for that every quality is abated by its contrary:

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But when we come to the proof of the *minor*, the understanding avails not, because it is particular, and so is out of its jurisdiction, and its cognizance pertains to the imagination, which draws from the five exterior senses the proper and particular symptoms of the disease.

BUT if the indication be to be taken from the fever, or its cause, it is that which the understanding cannot reach, only it teaches to take the indication from that we apprehend most danger from: But which of the indications is greatest, the imagination only can comprehend in weighing the evils the fever does, with those that proceed from the symptoms or cause, the little forces, or great strength. To learn this notice, the imagination has certain ineffable proprieties, by means of which it reaches some things, which it can neither tell nor comprehend, and for which no arts are of use. Infomuch that we see a physician coming to visit the sick, who by the sight, hearing, smell, and touch, arrives at the knowledge of what seemed impossible; so that should we ask him by himself, how he was able to arrive at such nice notions, he could not tell, because it is a gift that proceeds from a fruitfulness of imagination, which may be otherwise called sagacity, and which by some common signs, uncertain conjectures, and where there is but slender footing, in the twinkling of an eye, learns a thousand different things, wherein the virtue of curing and prognosticating with assurance consists.

OF this sort of sagacity the men of great understanding are unprovided, because it makes a part of the imagination: infomuch, that having before their eyes the same signs that discover to others the secret of the disease; yet they make no impression upon their senses, because these very men are unprovided of imagination.

BUT a great doubt arises in this doctrine, which is to know how the physicians furnished with a great imagination, learn the art of physic, since they are defective in understanding? For if it be true, that these cure the sick better than the most learned physicians,

to what end do theſe loſe time to ſtudy in the ſchools? to this the anſwer is, That it is a matter of great importance, firſt to know the art of phyſic, for in two or three years a man may learn all that the ancients were gathering in two thouſand : and which if he were to acquire by his own experience, he ought to live at leaſt three thouſand years ; and in experimenting medicines, he would kill an infinite number of people before he underſtood all their virtues, from which he is freed, by reading the books of rational and experimental phyſicians, who acquaint us in their writings what they have found out in the whole courſe of their lives, to the end, that the doctors that come after them may boldly make uſe of thoſe that are ſafe, and forbear the poiſonous. Beſides which, we are to know, that the moſt common and vulgar things in all arts are the moſt obvious and eaſy to learn, and yet are the moſt important in the work ; and, on the contrary, the moſt curious and ſubtil are the moſt obſcure, and leaſt neceſſary in practice. And ſo it is, that the men of great imagination are not ſo wholly deſtitute of underſtanding and memory, but that in the remiſſ degree in which they poſſeſs theſe two powers, they may be able to learn the moſt neceſſary points of phyſic, which, as we ſaid, are the plaineſt ; and with the good imagination they have, they may better know the diſeaſe and its cauſe, than the moſt rational in the ſcience, ſince it is the imagination that finds occaſion of the remedy they ought to apply ; in which conſiſts almoſt the whole practice. Therefore *Galen* ſaid, that the true name of a phyſician was to be the *inventor of the occaſion* ; but to learn to know time, place, and occaſion, without doubt, are works of the imagination, becauſe that carries with it, figure and correſpondence.

THIS is farther embellish'd by one obſervation, that may be made, and that of no ſmall importance ; namely, that in the critical minute, the good imagination of the phyſician frequently hits upon what is proper to be done : whereas if he takes more time and further conſideration, there occurr to his mind a thouſand in-
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conveniencies, that hold him in suspense so long, 'till the opportunity for applying the remedy is slipt.

'Tis therefore never advisable to bespeak a good practical physician, to consider well what he is to do, but rather leave him, especially in critical cases, to the effect of his own imagination: For 'tis certain, that too nice speculation raises the natural heat to a degree so great and intense, that it confounds the imagination. But however, the physician who has it remiss, will not do ill to use more consideration, because the heat rising to the brain may thereby come to reach the pitch which this power requires.

As a farther proof of what we have asserted, we often find, that in the same cases, and even less dangerous, princes and great lords often fall under the physicians hands, when persons of less consideration do well; and this can only be, because the consequence of the one produces a fear, which is the effect of that cold which causes consideration, while in the other, the physician's imagination being free and unapprehensive, he naturally directs those methods, which make for the benefit and recovery of his patient.

THIS we have a late demonstration of in the person of *Joseph* emperor of the *Romans*, the brother and predecessor of his present imperial majesty *Charles VI.* who being taken ill of symptoms which were judged to prognosticate the small-pox, a consult of physicians was held, who, by reason of the consequence of the patient, being divided in their opinions, determined to stay 'till next day, to judge with more certainty of his distemper: the wise men tarry'd accordingly 'till next day, and then 'twas too late: the small-pox, for want of being assisted, struck in; nor could they ever be driven out again; and that august prince, on whose life a thousand great events depended, died a martyr to the over-great consideration of his physicians: And it had been happy for him and his family, if there had been but one physician in *Europe*, and even if the imagination of that one had been overcome by his understanding or consideration, that a good experienced nurse had been preferr'd to the whole faculty.

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FROM all that has been said, 'tis easy to observe, that a person of a lively imagination is the most likely to succeed in the study of the practical part of physic; while the knowledge of the theory seems to be confined principally to persons of a good memory, assisted by a sound understanding. To which we may add, That the bold and successful practice of the late eminent Dr. *Ratcliffe*, among us of the *English* nation, affords many instances of the truth of the doctrine above advanced, which are too well known to need enumerating.



CHAP. XV.

To what difference of wit the Military Art belongs, and by what marks the man may be known, who has it.

TIS certain, that prudence is a far more estimable quality in a general, and ought rather to be rewarded, than courage or bravery; for, as *Vegetius* said, there are few over-courageous captains, that luckily accomplish great actions; and the reason is, that prudence is more necessary in war than boldness in encountring. But what this prudence is, which is necessary, *Vegetius* could never find out, nor specify the difference of wit he ought to have, who commands in chief; and no marvel, because the manner of philosophizing on which this knowledge depends, was not then found out. True it is, that inquiry falls not within our first intention, which was to make choice of wits fit for letters; but war is a thing so perillous, and depending on such deep councils, and it is of such importance for a prince to know whom to trust his power and estate with, that we shall do no meaner service to the commonwealth in teaching this difference of wit, and its marks, than in the other differences

ces of wit we have described. You are to know then, that *Malitia* and *Militia*, as they have one name, so have they but one definition; for by the change only of one letter, each reciprocally passes into the other. What are the properties and nature of malice, *Cicero* recounts, when he says, that malice is nothing else but a fly and wary proceeding in mischief: and so it is in war; no other thing is acted, but how to offend the enemy, and to defend ourselves from his stratagems; so that the best property of a general is to be *malicious* to his enemy, and not to interpret any of his actions in good part, but all in the worst sense that can be taken, and ever to stand upon his guard. *Believe not thy enemy; with his lips he sweetneth, and his heart betrayeth thee, to make thee fall into the pit; he weepeth with his eyes, and if he light upon a fit occasion, he will not be satisfied with thy blood,* Eccles. xii.

THE wit that is necessary as well to project ambushes and stratagems, as also to evade them, *Cicero* has pointed to us, in deriving the etymology of this word, *versutia*, which comes, as he says, from the verb *versor*, forasmuch as those who are winding, wily, double, and cavillers, in a moment play their tricks, and change their measures with ease.

THIS property readily to nick the occasion, is a certain industry and sagacity, which belongs to the imagination; for the powers which consist in heat, perform their works with speed, by reason of which, men of great understanding avail little in war; because this faculty is but slow in its proceedings, being a friend of uprightness, plainness, simplicity, and mercy: All which occasion great inconveniencies in war. Men of these qualities are not only unacquainted with the tricks and stratagems of war, but also are easily cheated, because they trust every body. These men are good to treat with friends, with whom there is no need of the wisdom of the imagination; but only of the integrity and simpleness of the understanding, which endures no tricks, nor to do wrong to any; but they are of no use to contest with enemies, who are overreaching with their wiles, and therefore there is always
occasion

occasion for the same wit, to be on our guard against them. Wariness must be practised with an enemy, frankness and simplicity only with a friend.

IF then the general is not in the least to trust his enemy, but ever to suspect that he may over-reach him, he must necessarily have a difference of imagination, that forecasts, is wary, and can discover the designs which are covered under fair pretences. For the same power that finds them out, can only apply a remedy. It seems that this also is another difference of imagination, that devises instruments and machines, by means of which, fortresses are gained, tho' almost impregnable; camps are pitched, and each squadron marshalled in due place; the fit opportunities of attacks and retreats are known; as also the several steps in treaties and capitulations with an enemy; for all which the understanding is no less impertinent than the ears are to see withal. Therefore I doubt not in the least but that the art-military belongs to the imagination, since all that a good captain ought to do, carries with it consonance, figure, and correspondence.

THE difficulty is to know what difference of imagination in particular is required in war. Which I cannot resolve with certainty, because it is a very nice enquiry. Yet I conjecture that the art-military requires a degree more of heat than the practice of physic, and that the choler be somewhat allayed, but not utterly quenched. Which is plainly seen in this, that the subtlest and most intriguing captains are not the most courageous, nor desirous of coming to blows, or giving battle, but rather by ambushes and secret stratagems gain their ends; a property that *Vegetius* was more pleased with than any other: *For good generals, said he, are not those that fight in a plain field, with equal danger, but rather such as make use of secret surprizes, and without loss of men, ever cut off the enemies force, or at least hold them at bay.* The advantage of this kind of wit, the Roman senate knew; for tho' they had many famous captains, who won abundance of battels, yet at their return to Rome, to receive the triumph and glory due to their enterprizes, the
wailings

wailings of the fathers for their dead children, the children for their dead parents, the wives for their husbands, and the brothers for their brethren, were so great, that they diminish'd the glory of the triumph. Insomuch, that the senate resolv'd no more to chuse such valiant captains, who took such pleasure in fighting, but rather men a little timorous, but very designing; such as was *Quintus Fabius*, of whom it is written, that it was a miracle to see him offer a pitch'd battle in open field, especially when he was far from *Rome*, whence he could not readily draw succours, if he were worsted. All he did, was to dally with the enemy, and make use of stratagems and tricks of war, by which means he performed great things, and gained many victories, without the loss of one soldier: Accordingly he was received at *Rome* with universal applause, because if he led abroad a hundred thousand soldiers, he returned home with as many, except those that were lost by sickness. The publick acclamations the people gave him was what *Ennius* has reported.

Unus homo nobis cunctando restituit rem.

As if he had said, The glory of this man was to beat the enemy without blows, or effusion of blood, and to return home without loss of men.

SOME captains since have endeavoured to imitate him: but because they wanted his wit, and his designs, they have often slip't fair opportunities of fighting, whence have proceeded more inconveniencies, and greater losses, than if they had given battle out of hand.

THE famous *Carthaginian* captain *Hannibal*, was a master in this sort of wit, and called, *the father of warlike stratagems*, being skilled in all the arts of circumvention, and all manner of plots requisite to ensnare his enemy.

THE marks by which he may be known who hath this difference of wit, are very uncommon, and well worthy consideration. *Plato* said, that he who would be master of this talent, can neither be valiant nor good-natur'd,

natur'd, because prudence (as *Aristotle* has told us) consists in coldness, but courage and valour in heat. Now as these two qualities are inconsistent, and contrary to each other, in like manner it is impossible that the same man should be very valiant and prudent at once. Therefore it is necessary that his choler should burn to such a degree, as to become black, that he may be prudent; but where this kind of melancholy reigns, by reason of its coldness are ingendered also fear and cowardice: And it may be generally observed, that *if children are extremely timorous, it is a sign they will prove very wise*; because the materials they were raised from were much burnt, and of the nature of *atrabilis*. But there falls out a thing very observable, that of the four moral virtues, (prudence, justice, fortitude, and temperance) the two first require wit and a good temperament, to be put in practice; while fortitude and temperance are virtues which a man carries in his own hands, tho' he wants a natural disposition to them; for if he makes but small account of his life, and shew of courage, he may well do it; but if he be valiant by natural disposition, *Aristotle* and *Plato* say very well, it is impossible for him to be wise, tho' he would: After this manner then there is no repugnance, but that a prudent man may acquire both courage and fortitude; for a wise man has the understanding to hazard his honour for his soul, his life for his honour, and his fortune for his life; as it daily happens. From whence it comes, that gentlemen being more honourable, signalize their bravery herein as volunteers in an army, and undergo all manner of fatigues, tho' they have been bred in the midst of pleasures; and all for fear of being esteemed cowards. Whence came that saying, *God keep me from a gentleman by day, and from a thief by night*; for one to be seen, and the other not to be known, fight with double courage.

BUT however, if a gentleman had it in charge to encamp an army, and were to give orders to surprize the enemy, if he had not a wit proper for it, he would commit a thousand blunders; because prudence is not

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in the hand of man. But if he had orders to guard a pass, he might well be depended upon, even though he were naturally a great coward. The sentence of *Plato* is to be understood, when a prudent man follows his natural inclination, and corrects not the same by reason. And so is it true, that the very wise cannot be courageous by a natural disposition; for adust choler, which makes him prudent, the same, says *Hippocrates*, makes him timorous and a coward.

THE second property the man ought to have that hath this difference of wit, whereof we treat, is to be mild, and good conditioned; because he foresees a thousand things in his imagination, and allowing that the least slip and miscarriage may prove the loss of an army, he ever has an eye to the main chance. But those that know little, call carefulness, a toil; chastisement, cruelty; mercy, softness; suffering and dissimulation, good-nature: Which proceeds only from the dulness of men, who distinguish not the worth of things, nor which way they are to be managed; but the prudent and wise are out of all patience, nor can they bear to see things ill managed, though they have no interest in them. And therefore *Solomon* says, *Eccles. i.* *I gave my heart to know wisdom, and to know madness and folly, and perceived that this also is but vexation of spirit; for in much wisdom is much grief; and he that increaseth knowledge, increaseth sorrow.* As if he had said, I have been a fool, and I have been wise, and I have experienced trouble in every thing: For he that fills his understanding with abundance of knowledge, reaps no other advantage, but to be more pensive and morose. By which it seems, that *Solomon* would have us understand, that he lived more contentedly in ignorance, than after he had received wisdom. And so in truth it is, the ignorant live most careless, they are in pain for nothing, and they think no body in the world has more wit than themselves.

THE third property of those who have this difference of wit, is, that they are regardless of their dress; they are generally homely, slovenly, their stockings loose about their heels, sitting full of wrinkles, their

their cap slouching on one side, fond of old cloaths, never caring for change of suits.

OF this humour, (says *Florus*) was the famous captain *Viriatius*, a *Portuguese*, of whom (enlarging on his great humility) he speaks, and affirms, that the poorest common soldier in all his army went not so meanly clad as he. Though, in truth, this was no virtue, nor did he do it with design, it being a natural defect of those who have this difference of imagination, whereof we treat. The negligence of *Julius Caesar* much deceived *Cicero*, for being asked (after the battle) the reason that moved him to take *Pompey's* part, *Macrobius* tells us, that his answer was, *his girding deceived me*; as if he had said, I was deceived in observing *Julius Caesar* in such an undress, never having his girdle tight, (whom the soldiers in way of a by-word, call'd *dangle-coat*;) though this should rather have induced him to have believed, that he had the wit fit for a council of war; as *Sylla* could remark: so *Suetonius* has told us, who seeing this great captain, when a boy, and so carelessly dress'd, bid the *Romans*, beware of the ungirt boy.

THE historians also take notice of *Hannibal's* regardlessness of his cloaths, and his sandals, and how little he cared to go neat, or spruce.

HIPPOCRATES, desirous to shew the marks by which the wit and ability of a physician might appear, amongst many others he found to that purpose, has set down as the principal, the dress and equipage of his person. He that is cleanly about his hands, often pares his nails, glitters with diamond rings on his fingers, wears perfumed gloves, and is very nice in every thing, one may very well say, is a man of small understanding. You may know, said he, *men by their cloaths; for the oftner you see them curious in their being modish, and spruce, the more you are to avoid them*; for these persons are good for nothing.

BUT the reason of it is, that the great understanding and the great imagination despise the gaudy outside, affected by the men, whose soul lies in dress, and who seem to be turned, as it were, inside out: But

yet this is not their virtue neither; for it would be better that they observed a medium, and would so far condescend to the mode of the world, as to avoid singularity, and slovenliness, and appear decent.

IN the present age, and among us in *England*, there is so remarkable a difference, from the plainness affected by those heroes of antiquity, that one principal part of the glory of our modern soldiers, is dress and outward appearance; and it has been the sole inducement of many a gallant fellow, to despise occupations much better suited to his genius and capacity, purely for the sake of strutting, in time of profound peace, at the head of a company of better men than himself, in a scarlet coat, finely lac'd or embroidered; to which, not many years ago, we remember, were added, the farther decoration of a rich golden net-work sash, and a fine feather, 'till the emulating vanity of their brother-heroes of the city trained-bands put this part of foppery out of countenance among the pretty fellows of the blade; for whose sake, 'tis to be hoped, that our author's doctrine may not be inculcated without some exceptions.

THE fourth mark and property, is, to have a bald pate; and the reason of it is plain, inasmuch as this difference of imagination, as also all the rest, have place in the fore-part of the head; and excessive heat burns the skin of the head, and closes the pores thro' which the hair is to pass; besides, that the matter whereof the hair is made, is, (as the physicians say) the excrements which the brain sends forth in the time of its nourishment; and by the great fire there, all these excrements are wasted and consumed, and so the matter fails whereof they are produced.

WHICH philosophy had *Julius Caesar* understood, he would not have been ashamed of his bald head, since to cover this defect, he turned over his forehead the hinder part of his hair. And *Suetonius* tells us, that nothing was more pleasing to him than what the senate enacted, that he might always wear a laurel on his head, on no other ground than to cover his baldness. There is indeed another sort of baldness, which
proceeds

proceeds from a brain hard, earthy, and of gross parts; but this is a sign of a man defective in understanding, imagination, and memory, and with which we have nothing to do.

THE fifth mark by which they are known who have this difference of imagination, is, that they are men sparing in words, but full of sentences; and the reason of it is, that their brain being hard and dry, they must of necessity fail in memory, to which belongs choice of words.

THE sixth property is to be shame-faced, and to take offence at obscene and filthy talk. And so *Cicero* says, that men who are very rational, imitate the modesty of nature, who has hid the unseemly and indecent parts, which she made to provide for the necessities of mankind, and not for beauty, upon which parts she would not have us cast our eyes, or lend an ear to their names. And so in the history of *Julius Caesar*, we meet with an act of the greatest modesty; for while he was stabb'd with poniards in the senate (seeing that there was no possibility of escaping death) he fell down on the floor, wrapping himself up in his imperial robes, so that after his death he appeared stretch'd out very decently, with his legs and other parts covered, which might be offensive to the sight.

THE seventh property, and the most important of all, is, that the general be fortunate and lucky; but this can hardly be called a separate property, being the effect, principally, of the prudence and foresight of the general; and therefore when we find a man prudent and wise; thus we shall know certainly, that he has the wit and ability requisite to the art military. *Julius Caesar* making use of great prudence in all his designs, was the happiest general that ever was in the world; insomuch, that in the greatest perils he was wont to animate his soldiers in these words; *Fear not, for Caesar and his fortune attends you.* By the word *fortune* intimating nothing more than that customary good success, which always attended his actions, and which was the natural effect of his extraordinary prudence and foresight.

HE that invented the game of chess, left a model of the military art, representing therein all the steps and contingencies of war. And in like manner, as in this play, fortune has no share, nor ought the winner to be call'd fortunate, nor the loser unfortunate; so the captain, who is the vanquisher, should be called wise, and the vanquish'd ignorant; and not the one fortunate, or the other unfortunate. The first order in the game was, that in *mating* the king the game is won; to shew us, that all the strength of an army lay in the good head of the leader, or general. And to demonstrate, that there are allotted as many men to one as the other; to the end, that, whoever is loser, may be assured, he wanted skill rather than fortune. Which yet appears more plain, if we consider, that a good gamester may give half the men to a worse, and yet for all that get the game.

ANOTHER order is, that the *pawns* are not to move backwards; to advise the general duly to forecast all chances before he sends forth his soldiers to a service; for if they miscarry, 'tis better to be cut off upon the spot, than to turn tail; because the soldier is not to know when time is to fly or fight, save by direction of his captain; and therefore as long as he lives, he is to keep his post, under pain of disgrace.

ANOTHER rule is, that the *pawn* which has made seven draughts without being taken, is made a queen, and may make any draught at pleasure, and takes place next the king, as one set at liberty, and made noble. From which we are to understand, that it highly imports in war, in order to make the soldiers valiant, to proclaim donatives, free camps, and preferments due to them that signalize themselves; especially if the advantages and honour are to descend to their posterity; for then they will behave themselves with greater courage and gallantry. And so says *Aristotle*, that a man values more the greatness of his family than that of himself. This *Saul* well perceived, when he caused it to be proclaimed in his army, what should be done to the man that kill'd *Goliath*, 1 *Kings* xvii. *That the king should*

should enrich him with great riches, and give him his daughter; and make his father's house free in Israel.

THE reason of this is very clear in natural philosophy; for there is no faculty of all those that govern man, which will willingly work, unless there be some advantages to move it. From all which may be gathered, the importance of making the *pawn* a *queen*, which has made seven moves without being taken; for how many noble men soever there are, or have been in the world, have sprung, and will spring from *pawns* and *private men*; who by their courage have done such exploits, as they have merited for themselves and their posterity, the title of gentlemen, knights, lords, earls, marquises, dukes, and kings.

WHEN a man performs some heroick action, or gives proof of any admirable virtue, or extraordinary work, he may be said to be new-born, and procures for himself new parents, and loses that being which he had before. Yesterday he was called the son of *Peter*, and nephew of *Andrew*; to day he is called, *The son of his own actions*; and though he was ever so obscure before, his actions having ennobled him, he becomes the first of his family, and lays the foundations of a grandeur for his descendants that shall outvie the most splendid titles: In this sense that gallant captain said well, to a person of family, who upbraided him with the obscurity of his birth: *'Tis true, said he, you are descended from an ancient stem; but who ever did any more than hear of your ancestors names for many generations? But I and my right-hand, (which I now acknowledge for my father) are better gentlemen than you and all your family: And if you dispute this, let our prince and the commonwealth be judges between us.* — And to this purpose it was that *Juvenal* rightly says, that virtue is the only true nobility.

I AM of opinion, that a man ought to have six things, that he may be said to be honourable.

THE first, and most principal, is, his personal merit, in prudence, justice, spirit, and courage. 'Tis this that makes riches and birthright; from hence grow titles

of honour. From this beginning all the nobility in the world draws its origin.

THE second thing that honours a man (next to his own merit) is riches, without which, we see no man esteemed in a commonwealth.

THE third is, the nobility and antiquity of his ancestors; for to be well born, and of honourable blood, is a jewel of great value; but not without a great defect; for of itself alone 'tis of small advantage, as well to the noble, as to others, when reduced to necessity; but joined with riches, no point of honour is its superior in the general estimation: Nobility is therefore well compar'd to a cypher in arithmetick, which is nothing of itself alone, but added to any number, encreases it.

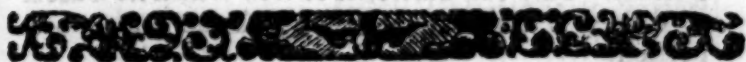
THE fourth thing that makes a man esteemed, is, to have some post or honourable office.

THE fifth thing, which though the lightest of all, is yet of some consideration, is, to have a good surname, that is acceptable, and that sounds well in the ears, and not to be called by ridiculous names, as some have been, who have thereby been led to change their names, to avoid being a by-word in every one's mouth. We read in the general history of *Spain*, a good example to the people: Two ambassadors being arrived from *France*, to demand of King *Alfonfus IX.* of *Spain*, one of his daughters in marriage, for king *Philip* their master, (one was very handsome, and call'd *Urraca*, and the other not so agreeable, and call'd *Blanca*). The two ladies being both together in the ambassadors presence, every one looked that they would chuse *Urraca*, because she was the elder, handsomer, and richer drest; but the ambassadors enquiring their names, stumbled at the name of *Urraca*, and chose *Blanca*, saying, that name would be more welcome in *France* than the other,

THE sixth thing that honours a man, is, the ornaments of his person, to go well dress'd, and have a good equipage, and a great train of followers.

BUT

BUT this may be reckon'd, in some measure, a digression: To conclude this chapter, we have therefore only to repeat, that we have proved, that prudence and foresight are the fundamental qualities of a man that would make a great figure in the military art; and that the virtues of fortitude and temperance, which are but secondary requisites, may be acquir'd, even against habit, while those of justice and prudence must be, as one may say, innate: And we shall only add, that perhaps no age ever produc'd a more illustrious instance of all that's advanced on this head, than the late great duke of *Marlborough*, who had the glory, never to be baffled in any of his projects: Who never sat down before a town, but he took it, who never fought a battle, but he won it; which particular felicity must be owing, morally speaking, to his extraordinary prudence and foresight,



CH A P. XVI.

*Of the difference of wit that is necessary to
the office of a KING.*

THE excellent *Spanish* author, from whom we have extracted the principal topics of the preceding sheets, proceeds next to define the difference of wit that is necessary to the office of a KING.

HE says particularly, that as the office of a king goes beyond all other arts in the world, so it requires the highest difference of wit that nature can produce. And that of nine temperaments found amongst men, there is but one (as *Galen* affirms) that makes a person as wise as nature can herself: In which temperament, the first qualities are so justly balanced, and so well proportioned, that neither the heat exceeds the cold,

nor the moist the dry, but all is found equal and harmonious, as if really they were not contraries, nor had any natural opposition: Out of which arises an instrument so well fitted and turned for the operations of the rational soul, that the man is provided with a perfect memory for things past, a strong imagination to penetrate into the future, and a great understanding to distinguish, infer, argue, judge, and make choice. Of the other differences of wit, which we have recounted, not one, says he, is entirely perfect; for if a man has a good understanding, (because of much dryness) he cannot learn the sciences belonging to the imagination and memory; and if he be furnished with an excellent imagination, (through much heat) he will be disabled for the sciences relating to the understanding and memory; and if he has a happy memory, (because of much moisture) we have already made it appear, how great memories are incapable of all the sciences. Only this difference of wit, which he is about to define, is that which answers all the arts in proportion.

How inconvenient is it, *proceeds he*, for one science not to be able to unite the rest, *Plato* notes, saying, that the perfection of each in particular depends on the knowledge of them all in general. There is no sort of knowledge at what distance soever it may be from another, that serves not to render it more perfect when it is fully known. *He says*, that the principal signs which distinguish this difference of wit, are the following:

THE *first*, in the words of *Galen*, is to have the hair nut-brown, between fair and red, which proceeding from age to age, comes to show more golden. And the reason of it is clear, for the material cause of hair, is, as physicians hold, a gross vapour, rising from the digestion performed by the brain at the instant of its nourishment. If there enter much flegm in the composition of the brain, the hair will be fair; if much choler, yellow as saffron; but when these two humours are found equally mix'd, the brain remains temperate, in hot, cold,

cold, moist, and dry; but the hair brown, and participating of two extreams, is very deceitful.

THE *second* mark, that he ought to have who has this difference of wit, *Galen* says, is to be well shap'd, airy, agreeable, and pleasant, so as the sight takes pleasure in beholding him, as a figure of rare perfection. And the reason of it is clear, for if nature be strong, and have well-tempered materials to work upon, she duly makes the best and most accomplished in the kind; being somewhat disabled, she employs most of her labour in the formation of the brain, because that is the chief residence of the rational soul, whence we see many men vast and deformed, but yet of excellent wits.

THAT for what regards the stature, the middle-size is better than over-tall or short: And if it should incline to either extream, it is better too short, than tall, for bones and flesh much incommode wit, and big men have much moisture in their composition, which dilates the flesh, and makes it more pliant to receive the augmentation, which the natural heat procures. It fares quite contrary in little bodies, for through their over-dryness, the flesh cannot take its course, nor the natural heat enlarge or stretch it out; and therefore they remain of a low stature. But amongst the first qualities, we have prov'd before, there is none so prejudicial to the operations of the rational soul, as much moisture, nor that so quickens the understanding as dryness.

THE *third* mark by which this difference of wit may be known, is, as *Galen* says, that he be virtuous, and of good conditions; for if he be lewd and vitious, *Plato* says, it is owing to some intemperate quality that is in him, and if such a one would practise what is agreeable to virtue, he must first renounce his own natural inclinations. But whoever is of an exact temperament, so long as he continues in that state, stands in no need of any such diligence; for the inferior powers require nothing from him that is contrary to reason. Therefore *Galen* says, that to one that has this temperament, we need not prescribe a diet, whar

he should eat or drink, for he rarely or never exceeds the quantity or measure that phylic would set him. And *Galen* contents not himself with calling them most temperate, but adds further, that it is not so much as necessary to moderate the passions of their soul, for their anger, their grief, their joy, and their mirth, are measured always by reason. Whence it follows, that they are always healthful, and never sickly, which is the *fourth* mark.

THE *fifth* property of those who enjoy this good temperament, is, to be very long-liv'd, as being very powerful to resist the causes and occasions of diseases; and this gives the greatest advantage imaginable to the prince, by strengthening his experiences, and blessing his dominions with a regular pursuit of councils and views, that must needs render them both prosperous and happy.

THE *last* mark is what naturally results from all the rest; for a prince form'd so excellently as is describ'd, must necessarily be very wise, of great memory for the past, of great imagination to penetrate into the future, and of great understanding to discover the truth in all things.

THESE are the requisites our author lays down for the person who shall well-execute the office of a king, but as such a happy temperament is very rarely form'd by nature, and an age produces not such a genius among all the sons of men, such great qualities are not to be expected often among princes, who generally succeed by lineal descent, and whose families, though they may have sway'd the royal scepter for a long series of years, have not often produc'd more than one great man, who 'tis likely was the first sovereign of his race, and by his virtues (perhaps from an obscure beginning) transmitted the diadem to his remote descendants.

'Tis almost too melancholy a reflection for human nature to support, to ruminate on the wretched paucity of great genius's in the royal families of *Europe* for these last two hundred years. Since *Charles* the Vth. emperor and king of *Spain*, what have *Germany* or *Spain* produc'd worthy the glory of the imperial or royal name?

— The perfidy and wantonness of power of *Louis XIV.* by which he sacrificed the true happiness of his people

people and his own glory, to a wretched ambition, though a considerable genius, will not make a sufficient exception for *France* to boast of any very great name since *Francis I.* and *Henry IV.* — *Gustavus Adolphus* stands alone for *Sweden*; for the valour and brutal fierceness of the late *Charles XII.* had seem'd to be his only great qualities, and he appear'd totally abandon'd of prudence and consideration, the chief glory of a great prince; and the exceeding miseries to which he had reduc'd his subjects can never be aton'd for by his fortitude only. *Denmark* boasts not one great name in all that space of time we have mention'd; and the unhappy constitution of *Poland* fetters too much their sovereigns to intitle them to the benefit they now and then might expect from their elections, if they were ever suffer'd to be free from the intrigues and chicaneries of their powerful neighbours, which, on a vacancy, joyn'd to their intestine brangles, take place, and throw 'em into confusion, and often cause them to chuse the least deserving.

As for *Russia*, before the late *Czar Peter* the Great, those vast dominions made the most contemptible figure of any nation upon earth, and he stands alone the glory of his country, and indeed unrivall'd by the greatest of all the princes among the moderns: who first having instructed himself in the arts of government, of war, of navigation, and in all the sciences, became a painful schoolmaster to the most barbarous and most indocile people in the christian world. The *Portuguese* have not one extraordinary genius to boast in all that space: The *Ottomans* keep their footing in *Europe*, only by reason of the dissensions among the christian princes, and have been dwindling for a century: And, setting aside the fifth and seventh *Henries*, queen *Elizabeth*, and the late great king *William* the third (who was too much cramp'd and mal-treated to exert his great genius as he would otherwise have done) what have the *English* to boast, if we say nothing of his * present majesty, as we have not included the now reigning sovereigns of any of the nations we have particulariz'd,

* *N. B.* This was written in the latter end of the Reign of his late Majesty King *GEORGE I.*

because

because no man can presume to give characters of the living, since none can properly be said to be great or otherwise, 'till they have finished their race of glory or infamy, and had their triumphs or disgraces ended by death. We have said nothing of the two new kingdoms of *Sardinia* and *Prussia*, because the one is the first, and the other the second prince that have ever been of those names and titles: Nor yet of the inferior sovereign houses, because they are too much circumscribed to be able to exert themselves in a course of glorious actions; except, indeed, the family of the *Nassau's* princes of *Orange*, who have been noted for some ages, to have blest the world with a constant succession of heroes, who had they been born to a powerful crown, would have shone among the first of princes.

FROM all that has been said, we are not to expect, that any nation can be often blest with princes of the temperament and capacity before-mentioned. And indeed the whole race of mankind, seems to be dwindling and degenerating apace, not only from the greatest examples, but into vices and immoralities that are shocking to nature, to morality, and of the most pernicious tendency to the well-being of civil society. — But let us cease these disagreeable reflections, and pursue our subject, that having laid down directions whereby to judge of the Education proper for different capacities, according to the principles of natural philosophy, we may now give some practical rules for Education that are more peculiarly adapted to the *English* taste and genius: which may be look'd upon as our mite, thrown in with a sincere and good intention, to better the age in which we live, or at least to help to improve that which is rising to succeed us.

BEFORE we pursue our intended design, it may not be improper in this place, to collect together in one view, the principal heads of the preceding sheets, which at the same time, that they will direct the Reader to such particulars as may be most to his purpose, will be of use to him in perusing the rules we shall venture to lay down, in the subsequent pages relating to this important subject.

A Brief



A Brief

ABSTRACT

Of the preceding

WORK.

CHAP. I.

- p. 1. **W**HAT wit is, and what differences of it are ordinarily observ'd among men.
Definition of the word wit.
- p. 2. *Wit, a generative power, which becomes pregnant, but wants a midwife to deliver her.*
Notion, or idea, the offspring of wit.
- p. 3. Cicero's definition of wit.
His definition too short.
- p. 4. *A strong memory impedes the copiousness of the understanding.*
A sharp understanding and good ear, may make great progress in knowledge by the contemplation of natural things, without a master.
Observations on a saying of Plato, and on Solomon's famous petition for wisdom.
- p. 5. *According to Plato, the greatest wits requir'd for divine studies.*
- p. 6. *Many persons set to study divinity, that should rather have been set to till the earth.*
Aristotle's description of a learned man.
Differences of wit.

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- p. 16. Xenocrates call'd by Plato his hopeless scholar.

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- p. 17. A master should narrowly sift a scholar's ability, and if he finds him incapable of learning, should refer him to some other employment.

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- p. 26. Galen's opinion, that men of penetration should be appointed to examine the different capacities of youth.

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- p. 28. Contrary to this, the observation that there are many persons who are virtuous in spite of constitution.

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- p. 30. Persons of equal temperament of sweet temper, and inoffensive.

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- p. 40. *The rational soul immers'd in a great quantity of flesh, a bad indication.*

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- p. 41. *A spare body and abstinence as much elevate it.*

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A continuity of parts also requisite in the brain.

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- p. 42. *The brains of brutes compos'd as those of men.*

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And in memory and fancy.

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- P. 43. *That the vegetative, sensitive, and rational souls are knowing without teachers, when they meet with a temperament agreeable to their operations. Temperament of the four first qualities rightly call'd nature.*
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- P. 44. *Instinct of nature, a term the antient philosophers recurr'd to, when they were to account for things beyond their comprehensions.*
Hippocrates, Plato, Aristotle, refer these operations to the temperament we call nature.
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- P. 45. *Plato's opinion better grounded, that the first man only was made by God, the rest produc'd by second causes.*
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- P. 46. *Instances exploding the notion of natural instinct.*
- P. 47. *These instances prove the temperament of the four first qualities, to be the reason of one beast's excelling another of the same species.*
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- P. 48. *This opinion erroneous.*
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- P. 49. *The natural temperament, by some called instinct, how it instructs infants to pursue what makes for their preservation.*

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- P. 50. *Further remarkable instances of the effects of this change.*

- P. 51. *Choler a necessary requisite to a good poet.*

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- P. 53. *Further instances of the Spanish author of the force of this delirious enthusiasm.*

Persons who have a proper disposition for peculiar attainments, able to do surprizing things.

- P. 53. *Instances of this from Aristotle.*

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The temperament, and not inspiration, the reason why the children of the same parents shall differ in their capacities, and one be a poet, and the other a dunce.

- P. 54. *Tully of persons who are ignorant of natural causes.*

Cicero's observation upon the different capacities of man.

- P. 55. *Men endow'd with capacity to distinguish three differences of times; the past by his memory, the present by his sense, the future, by his imagination and understanding.*

Why Tully believ'd the soul incorruptible.

Contrary instances to the opinion of Hippocrates,

That distemper'd persons, who seem to have the gift of prescience, seldom recover.

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- P. 55. *But the prudent and discreet faintly imitate God with regard to foresight.
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- P. 56. *All the difference of wit in man proceeds from the three qualities of heat, moisture, and dryness.
Each action requires a different instrument.
One organ in the brain to understand, another to imagine, and a third to remember.
Yet these different organs not distinguishable on dissection.*
- P. 57. *For there are many compound things in man's body, which our senses judge to be simple.
Use of the fourth ventricle in the cavity of the brain.
Reasoning and the digestive faculty extremely opposite in their operations.
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Office of the fourth ventricle.*
- P. 58. *The use of the three little cells before.
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- P. 59. *The rational soul, while in the body, cannot exercise her operation without the mediation of corporeal instruments.
Of the four qualities, viz. heat, cold, moisture, and dryness, that of cold, according to Galen, of no use in the operations of the rational soul.*
- P. 60. *Aristotle of the contrary opinion, who asserts, that a more delicate sense and understanding, proceeds from the thinner and cold blood, than from the hot and thicker.*

- p. 60. *His reasons why men in hot countries are generally more ingenious than in cold.*
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With which opinion Galen also coincides.
But this must be taken only with regard to moderate cold.
Too intense a heat the cause of sickleness and instability of mind.
- p. 61. *The effects of cold on the faculties of the mind.*
Another kind of steadiness, which proceeds from the compactness of the understanding.
Dryness, moisture and heat, are instruments of the rational faculty.
Ants and bees, who may dispute with men for wisdom, have a cold and dry constitution.
The hog, a most stupid beast, of a moist one.
This confirm'd by Pindar in his sarcasm on the Boeotians.
- p. 62. *Too much natural heat in the blood, replete with vapours.*
Wise mens children generally defective in wit.
All the great men in sciences, melancholic.
The prophet Isaiah, with great truth, attributes to vexation or sorrow the improvement of the understanding.
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And impairs the understanding.
Disposes to sports, feasts, music, and indisposes to study.
- p. 63. *Hence the changes in the disposition that frequently occur, even in a wise man, suddenly promoted from indigence to plenty.*
The memory alone, of all the faculties, not hurt by moisture.
Why we call memory a rational faculty.
Proper office of the memory.
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- P. 64. *Why the memory is readier in children than grown persons.*

Aristotle's reason why childrens memories are readier than those of men.

His difference between the morning and evening memory.

Aristotle mistaken in his assertion.

An implicit faith not to be laid even upon the greatest authors.

- P. 65. *For a slavish dependance on the opinions of our predecessors may increase our faith, but not improve our knowledge.*

Moisture the true reason of a good memory, dryness of a sound understanding.

Hence children who have a moist brain remember best; old men who have a dry brain, have most understanding.

The true reason why the memory is better in the morning than in the evening.

- P. 66. *Great memory and great understanding naturally incompatible.*

Difference between memory and remembrance.

Imagination arises from heat.

The imagination contrary to the memory and understanding also.

- P. 67. *But three principal differences of wit in men, correspondent to the three primary qualities.*

Tho' the understanding is benefitted by dryness, and the memory by moisture, yet an excess of either detrimental to each.

Three principal actions of the understanding, to discourse, to distinguish, to chuse.

- P. 68. *The memory also divided into three; that which readily receives, and as soon loses; that which receives with difficulty, and retains long; and that which easily receives, and is long a losing.*

The imagination has three differences also; from each of which arise three others.

- p. 68. Three different sorts of capacities;
1. The half-witted, or smatterers, who are incapable of the abstruse or subtle parts of what they study; but with ease get over the easy parts.
 2. The more docile, who receive strong impressions of all they study; but require infinite pains and able masters to understand the sciences, and after all are not able to walk without the leading-strings of other mens labours.
 3. The perfect wits; who from the brightness of their own parts, penetrate every thing with very little assistance.
- p. 69. These the only fit genius's for writing books, or giving rules to others.
- The two first classes ought to be discourag'd writing, since they can be only collectors and plagiaries.
- The third sort, why term'd capricious wits by the Tuscans.
- They are of great use to a master of a school, to be at the head of the other two.

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- p. 70. Some doubts and arguments against the doctrine of the last chapter, answer'd.
- The uncertainty of human wisdom.
- Objection I. propos'd, and answer'd.
- p. 72. As the understanding improves, the memory grows worse.
- Distempers which impair the understanding, often leave the memory and imagination vigorous.
- This point discussed and adjusted.
- p. 73. The memory not contrary to the understanding.
- On the contrary, no faculty so subservient to the operations of the understanding as that.
- p. 74. A great plague in Asia, which deprived men of their memories.
- This occasioned temples to be dedicated to memory, as a goddess.
- Memory the treasury of the sciences.

- P. 74. If the brain be well-temper'd, a man may have a good understanding, with a great memory, tho' this does not often happen.

Object. II. propos'd and answer'd.

- P. 75. Object. III. propos'd and answer'd.

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- P. 76. That part of the soul which imagines, the same that remembers.

Aristotle's error in believing the remembrance a different power from the memory.

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- P. 77. The brain often possesses a temperament distinct from the other parts of the body.

Natural reason for the difference of the flesh of women and children from that of men.

Choler and melancholy harden the flesh.

Soft and delicate flesh a sign of weak intellectuals.

Easy in men of equal temperament to guess at their wits by the softness or hardness of their flesh.

Signs from the hair to be attended to, in judging of wit.

Laughing a passion that indications may be taken from.

- P. 78. Some philosophers opinion of the cause of laughter. Laughing fits more safe in frenzy, than weeping ones.

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- P. 79. Great laughers generally want imagination.

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- P. 80. Two sorts of moisture in the brain.

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Object. VII. stated and answer'd.

- P. 81. Moderate exercise fattens.

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- p. 81. *Natural melancholy a bad temperament.*
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The true, open and upright wisdom to what to be attributed.
 p. 83. *The nature and composition of slow wit.*
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- p. 84. *Each difference of wit is appropriated to the science with which it most particularly agrees. Brief instances thereof.*
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The duty of parents or tutors to find this out.
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- p. 87. *A remarkable instance of an excellent school-divine's incapacity to attain pure latin.*
- p. 88. *A second remarkable instance of another divine. Great poets seldom have a good understanding.*
- p. 89. *This proved in the famous poet Pope.
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- p. 90. *The most judicious criticks, who seldom make good poets, a further proof of this observation.
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- p. 91. *Musick-masters, choristers, &c. a further proof.
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- p. 92. *Youths that affect to flourish and to draw, what their genius bends to.
To read with a good grace, discovers a certain kind of imagination
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- p. 93. *Students neatness in their books and chambers, (as the finical dresses of beaux) discover a genius of imagination, contrary to that of understanding. Agreeable drolls, and persons who converse pleasantly in the same predicament. What the genius of such persons is best suited to. Error of a vulgar observation with regard to such persons abilities. Slowness of speech in children accounted for. This quality in childhood, a sign of a great talker in maturer years.*
- p. 94. *A good voice, and a verbatim memory no signs of a good understanding.*

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- p. 95. *The Athenian ignorance of this doctrine, a reason of their wonder that Socrates wanted the gift of utterance. The bad stile of Aristotle, the obscurity of Plato, the unperspicuity of Hippocrates, the unconvertibleness of Virgil, and the rude speech of S. Paul, so many instances of the truth of this doctrine. Wherein, however, St. Paul's temperament was the most accommodated to his vocation and ministry that could be.*
- p. 96. *Even supernatural gifts, when they fall upon a suitable genius, more efficacious than if they fell on the contrary. St. Jerome's reason why the same holy spirit that spoke elegantly in the mouth of Isaiah, spoke in that of Jeremiah, in the stile of a peasant.*
- p. 97. *Why languages and politeness of speech accord with positive divinity. A description of a person of superficial understanding. The vulgar mostly taken by superficialists.*
- p. 98. *Why persons who have only imagination and memory, are incapable of interpreting the holy scriptures.*

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P. 99. *A good understanding and a great imagination seldom meet in one person.*

The most voluble preachers have the shallowest understanding.

They only lightly skim over the surface of the sciences.

Mankind generally taken by sound rather than sense.

The sense of a man of profound genius, lies too deep for the vulgar to fathom.

The former voluble sort should never print their works.

The latter should write rather than preach.

P. 100. *Oblivion the fate of the one; eternity of the other, in his works.*

Rules laid down to qualify men for orators.

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An exuberant invention a great requisite.

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Action the spirit and life of elocution.

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- p. 102. Application another great property of an orator.
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- p. 103. A ready and fluent Tongue, another property.
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- p. 104. Wrath to the phlegmatic supplies the force of genius and satire.
Aristotle's reason why men of slow speech speak loud.
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- p. 105. No rule so general, but admits of some exception.
'Tis possible, tho' very rare, that all the faculties may unite to make a great genius.
This genius, if it were frequently to be found, the most adapted to preaching.
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- p. 107. Lawyers privilege, above physicians, to avow their ignorance.

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- p. 108. The uncertainty of the laws and difference of opinions in lawyers makes going to law precarious.
The sentence of the judge, perhaps, no more than his partiality, or at best, but his opinion; not an infallible rule of right or wrong.

- P. 108. *Judgments on appeals to the last resort, also precarious determiners of right.*
- P. 109. *He that is once in the wrong, always in the wrong. Pleaders encouraged to undertake any cause, by the diversity and uncertainty of the judges opinions, The remedies for this, to chuse men of great abilities. But the best remedy is to avoid going to law at all. Rule to judge of a capacity for this study.*

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Henry Bowman's
Book 735



S U P P L E M E N T.

WE had intended, as our Readers will see by our Conclusion to the preceding Sheets, to have annexed a SECOND PART, calculated more particularly for the Education of the *English* Youth, from their Infancy to Manhood: But being advis'd, that such an Addition, as the Subject was too important to be reduc'd into a very narrow Compass, would lengthen out this Volume beyond the Compass design'd for its easy and portable Conveyance (which the Reader will observe by the Smallness and Neatness of the Character, was a Point we had in View) and being sensible that the Quantity of Matter herein contain'd, is equal to that of most Books in *Duodecimo*, of a greater Number of Sheets, and this being of itself a compleat and independent Piece, we have thought it proper to postpone our Intention to some other Opportunity.

But having, however, a Vacancy of a few Pages, we think we cannot better fill it up, and more suitably to the Subject, than by the following Extract from another *Spanish* Author of Note, *Baltasar Gracian*, translated into *English*, and lately published under the Title of *The Complete Gentleman*, * pointing out how such a one ought to spend his Time, to make his Life Useful to Others, and Happy to Himself. And this we shall do with very small Variation, and that only to avoid the Author's Partiality to his Country, in one or two Instances.

“ The wise and complete Man, says this Author, is
 “ an Oeconomist of his Time. He divides his Life
 “ into regular distinct Portions; wisely considering
 “ how comprehensive the Span is, how infinite the
 “ Importance of it, and how short the Duration.

* See Chap. xxv. intitled, *The Distribution of the Complete Gentleman's Life.*

“ Life.

“ Life, however short it is on other Accounts, yet,
 “ if it were not distributed into Parts, would be like a
 “ long tedious Road without Lodgings or Accommo-
 “ dation.

“ Nature, expos’d to our Eyes for our Instruction,
 “ divides her self in the Space of one single Year into four
 “ different Seasons. And this Variety in the Universe
 “ represents that Diversity of Ages, which make up the
 “ Series and Contexture of human Life. The *Spring*,
 “ abounding with tender Flowers, is our *Infancy*; which
 “ is full of nothing but frail Hopes. The *Summer* is
 “ our *Youth*; a tempestuous hot Season, wherein the
 “ Passions are kept in a violent Ferment and Agitation,
 “ through the perpetual boiling of our Blood. *Autumn*,
 “ crown’d with Fruits, is our *Manhood*; ’tis the ripe
 “ Age of Man, full-grown and mature in his Principles,
 “ Projects and Counsels. Last of all is *Winter*; which
 “ is a true Symbol of *Old age*, succeeding our Man-
 “ hood. Then every thing in us begins to decay, our
 “ Eyes grow weak, our Hair grey, our Teeth shake,
 “ Wrinkles come, and the Blood’s chill’d: The whole
 “ Man trembles, ready at every Step to fall and tumble
 “ into his Grave.

“ This *Diversity* of Ages and Seasons in the Course of
 “ Nature, the wise Man proportionably imitates in the
 “ Course and Order of moral Life. The first Part of
 “ his reasonable Years (if I may term them so) he em-
 “ ploys in conversing with the *Dead*; the second in
 “ conversing with the *Living*; and the last with *himself*.

“ Let us expound this little Mystery. I mean then,
 “ that the wise Man dedicates the *first* Part of his Life
 “ to *Reading*, and this is not so properly Business or
 “ Employment, as it is a disposing and preparing of
 “ himself for it. However this Sort of Study deserves
 “ its Commendation; for to learn, is the noblest Exercise
 “ and Operation of the Mind; as Knowledge is the pe-
 “ culiar Perfection that distinguisheth Mankind, and
 “ gives one a Pre-eminence over another. But if a Man
 “ would improve and adorn his Mind to the best Advan-
 “ tage by his Reading, he ought to know what Books
 “ are most excellent and valuable in their Kind. The

“ Way

“ Way to attain this useful, necessary Knowledge is to
 “ converse with learned Men, and assist our own dis-
 “ cerning Faculty with their Judgments and Approba-
 “ tion.

“ He begins with the Study of *Languages*, in the first
 “ Place with *Latin* and *French*, which are the two
 “ universal Tongues, and the Keys of the World at
 “ this Day. He then applies himself to *Greek*, to *Spa-
 “ nish*, *Italian*, *English* and *Dutch*. This understanding
 “ of Languages is highly necessary towards our excel-
 “ ling in other Sciences; it enables us to know, to
 “ compare, and to use, upon Occasion, the various
 “ Thoughts, which the fine Genius’s of different Coun-
 “ tries have had upon a Subject.

“ From Languages he proceeds to *History*, with this
 “ Caution, to pick and cull out those that are most in-
 “ structive and entertaining at the same Time. He
 “ begins with *antient* History, and ends with *modern*,
 “ A great many People indeed follow the contrary
 “ Method. But that, methinks, is against natural Or-
 “ der, and attended with this Inconvenience; that it
 “ leaves the antient to a great Hazard of not being read
 “ at all, because, on Account of the Distance of Time,
 “ ’tis less apt to engage our Affections or excite our
 “ Curiosity. However, the most essential Point is not
 “ to chuse the most florid, but the most accurate
 “ Writers, whether in sacred or prophane Histroy, in
 “ that of our own, or of other Countries. And, to
 “ prevent, as much as possible, all Confusion and For-
 “ getfulness, we should range and digest the Things
 “ we read into some compendious Form, to make
 “ them more portable for the Memory. We should
 “ carefully mark down Times, Epochs, Centuries,
 “ Ages; the Extent of Empires, Kingdoms, Common-
 “ wealths; their Progress, Revolutions, Changes and
 “ Declensions; the Number, Order and Qualities of
 “ the Prinees, that have reign’d over those States and
 “ Kingdoms, their Actions Military and Civil. A
 “ Man, I own, ought to have a happy Memory to
 “ retain all this; but a certain System which he may
 “ form by his Judgment, will be a great Relief and

“ Assist-

“ Assistance to the Memory, and supply what is wanting to its Perfection.

“ From hence he takes a Turn into the delightful Gardens of *Poetry*; not so much to exercise himself in the Art, as to gather up the Flowers and Beauties of it. The reading of the Poets is not only an exquisite Pleasure to the Mind, but 'tis moreover of infinite Advantage, and in some measure, if not absolutely, necessary. And tho' a Gentleman be too prudent to make Poetry his Business or Profession, yet he has not so little of the Poet in him, but he can make a Copy of Verses upon Occasion. But let that be his *ne plus ultra*. He reads all the true Poets, that is, all those that have excell'd. Their Works are full of judicious Sentences, sublime Thoughts, noble Sentiments, elegant Turns, happy Expressions; in a Word, of a thousand delicate Strokes and Touches of all Kinds, which form, elevate and embellish the Understanding. But tho' he esteems all the Masters of the Art, and derives Benefit and Improvement from them all, yet he has some that are his peculiar Favourites, that he more particularly cherishes than the rest. Such is *Horace*, for Example, or * *Martial*; the one is a constant, perfect Model of true Wit, delicate Sense, elegant Choice, exquisite Taste, and Excellence in every Respect; the other is undoubtedly the most extraordinary, and will remain so, in the Art of cooking up a Thought with the most poignant Seasoning and exquisite Relish.

“ To Poetry he adds the other Parts of liberal, genteel Knowledge, and so gathers up a Treasure of that agreeable polite Learning, which gives Lustre and Beauty to the most abstruse Sciences.

“ From this polite Learning he enters upon *Philosophy*, and in the first Place upon *Natural Philosophy*. He studies the first Principles of Things, the Structure of the Universe, the Contexture of human Bodies, the Properties of Beasts, the Virtues of Plants, and the Qualities of Metals. But he dwells the longest upon

* Our Author was of *Bilbilis*, the Poet *Martial's* Country.

" *Ethicks, or Moral Philosophy*, which is the proper
 " Food of the Soul, and what perfects her in all the
 " Virtues and Qualifications of a Gentleman. This
 " Science is to be collected chiefly out of the Sages and
 " Philosophers, who have reduc'd it into Sentences,
 " Axioms, Emblems, Satires and Fables. He grows
 " enamour'd of *Seneca, Plato*, the seven wise Men,
 " *Epictetus, Plutarch*, without disdaining the amusing
 " and instructive *Æsop*.

" He then applies himself to *Cosmography* of both
 " Kinds; he learns to measure the Land and the Sea;
 " to distinguish Climates, Latitudes, and the four Di-
 " visions of the World; the Provinces, Nations, King-
 " doms and Republicks compriz'd therein. He finds a
 " double Advantage in this Study; the one is to *know*
 " all this, and the other is to be able to *discourse* upon
 " it; that he may not be like a great many ignorant
 " Persons, that scarce know the Climate they live in.
 " He then acquires the Knowledge of the celestial
 " Globes, which roll over our Heads; he observes their
 " various Motions, numbers the Stars and Planets, and
 " acquaints himself with their Influences and Effects.

" As to *Astrology*, he examines no farther into that,
 " than Wisdom allows.

" All these Studies terminate in the constant reading
 " the *Holy Scriptures*: For that is undoubtedly the most
 " profitable, the most comfortable, the most agreeable
 " and satisfactory Reading, both for the Sublimity and
 " Variety of the Matter contain'd in the sacred Pages.
 " King *Alphonso* the Magnanimous, in all the Multipli-
 " city of his important Affairs of Peace and War, found
 " Time to read the whole Bible fourteen Times over,
 " together with Commentators and Expositors.

" This is the Price, at which he purchased the glo-
 " rious Appellation of a Compleat Gentleman. *Moral*
 " *Philosophy* makes the *honest* Man; *Natural Philosophy*
 " the *ingenious* Man; *History* the Man of *Experience*;
 " *Poesy* the Man of *Wit*; *Rhetorick* the *eloquent* Man;
 " *polite Learning* sheds a diffusive Grace and Ornament
 " upon all Kinds of *Literature*; the *Knowledge of the*
 " *World* constitutes the *intelligent* Man; the Study of
 " the

“ the *sacred Pages* forms the *good Man*; but *All* this
 “ must go together to make the *perfect, compleat Gen-*
 “ *tleman*.

“ The *second Part* of *Life* he dedicates to the Con-
 “ versation and Knowledge of the *Living*, and to enjoy
 “ the greater Variety of that Pleasure, he travels into
 “ different Nations and foreign Countries. This Inclination to travelling is a great Happiness to him that
 “ undertakes it for the Sake of Improvement, with
 “ the Curiosity of getting a personal Information of
 “ Things, provided he has a Capacity for that Purpose.
 “ He meets with some Fatigue indeed in seeking and
 “ searching; but then he finds infinite Pleasure and
 “ Satisfaction in discovering and examining all the Cu-
 “ riosities of the World, and in making his Uses and
 “ Improvements from them. What a Man does not
 “ see, he does not properly know, and can only relish
 “ imperfectly. There is a great Difference in this Re-
 “ spect between the *Eyes* and the *Imagination*.

“ A judicious Traveller has two considerable Advan-
 “ tages; the one is, to have a juster Knowledge of
 “ what relates to foreign Countries, than other People
 “ have; and the other is to reap more Pleasure from it,
 “ than any other Persons can possibly do. For he that
 “ sees curious Objects but *once*, has a very different
 “ Sense of them from him that sees them *every Day*.
 “ Those Rarities and Wonders are common to the lat-
 “ ter; but in regard to the former they have the
 “ Charm of Novelty, which both excites and gratifies
 “ his Curiosity. When a magnificent Palace is first
 “ finish'd, it is for a while the Delight of the Owner;
 “ but in a little Time that Pleasure forsakes him, and is
 “ transfer'd to Strangers.

“ The Benefit a Man reaps from travelling is very
 “ obvious. In the first Place he brings Home at least
 “ experimental Knowledge, which has always been
 “ esteem'd by wise Men. For this Knowledge unde-
 “ ceives us by the Testimony of our own Eyes in re-
 “ gard to the false Accounts and Descriptions, which
 “ ill-inform'd Writers have given of a Country; and
 “ con-

" confirms the Fidelity of those Descriptions, that are
" made by just and accurate Authors.

" As to the Places which he travels to, he generally
" confines himself to those that are of greatest Note;
" as *Spain, France, England, Germany, antient Greece,*
" and above all, *Italy*, where he makes his longest
" Residence. There he views and observes at Leisure
" all the Cities of greatest Fame, and all that is curious
" and singular in each, whether of antient or modern
" Date; the Magnificence of the Churches, the sumptuous
" and noble Architecture of the Palaces: There
" he remarks their Wisdom in Government and Policy,
" the understanding of the Inhabitants, the bright
" Genius's and fine Wits amongst the Nobility and
" People of Literature.

" There are many other Articles of Importance to
" be taken Notice of in one's Travels; one of the
" most material is to frequent the Courts of the most
" powerful Princes; for they are not inaccessible to
" Merit.

" There he finds every Thing, which either Art or
" Nature can produce; whatever is most rare and curious
" in Gardens, Terrasses, Fruits, Paintings, Statues,
" Jewels, Cabinets and Libraries. There he converses
" with the greatest and ablest Men in every Way, in
" Politicks, in Letters, in military Skill, in Arts, and
" in Virtue. And when he has judiciously examin'd
" and consider'd all this for his own Improvement, he
" makes a just and proper Estimate of it, without undervaluing
" it on one Hand, or over-rating it on the other.

" The last Portion of Life, which is the best, and
" should be the longest, he spends in conversing with
" himself; that is, in considering, ruminating and meditating
" upon all that he has read and seen, in order
" to make such an Use of it, as becomes his Character
" and Condition. For whatever enters into our Minds
" thro' the Medium of our attentive Senses, settles in
" our Understandings, and remains there to be made
" Use of and digested after our own Way. By this
" Means every sensible Thing becomes in some Sort
" in

“ intellectual, is weigh’d, examin’d, judg’d and deter-
 “ min’d by the Ballance of our Reason. And all the
 “ Subject-matter of our Reading undergoes the same
 “ Tryal; we revolve, unravel and define it, we make
 “ a nice and critical Judgment of it, in order to sepa-
 “ rate the true from the false, and the solid from the
 “ trivial and insignificant.

“ But the Time for these wise Reflections and Me-
 “ ditations (as I observ’d before) is our full and mature
 “ Age. Then the Understanding being grown more
 “ independent on the Senses thro’ long Experience, and
 “ less clogg’d and incumber’d by the Necessities of the
 “ Body, which are commonly supernumerary in the
 “ Time of Youth; then, I say, the Understanding is
 “ come to its full Vigour and perfect Liberty. Then
 “ it apprehends and is affected in a very different Man-
 “ ner from what it was heretofore. Its Maturity
 “ sheds its Influence upon all our Thoughts and Senti-
 “ ments. O the inexpressible Happiness of thinking
 “ and reflecting in this Manner! To know and to per-
 “ ceive what Things are proper for our Instruction,
 “ is what our *intelligent* Man may do; but to reflect
 “ upon them afterwards, and to digest ’em well, is the
 “ *wise* Man’s Province. To reason and philosophize in
 “ this efficacious Way, to rectify and undeceive the
 “ Mind in regard to all Objects whatsoever, is the so-
 “ vereign Point and Perfection of Wisdom. And this
 “ Philosophy chiefly consists in the frequent Medita-
 “ tion upon our *last* End; that is the Point in which
 “ all our Thoughts should centre, in order to dye
 “ well once for all.

F I N I S.



my dear

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